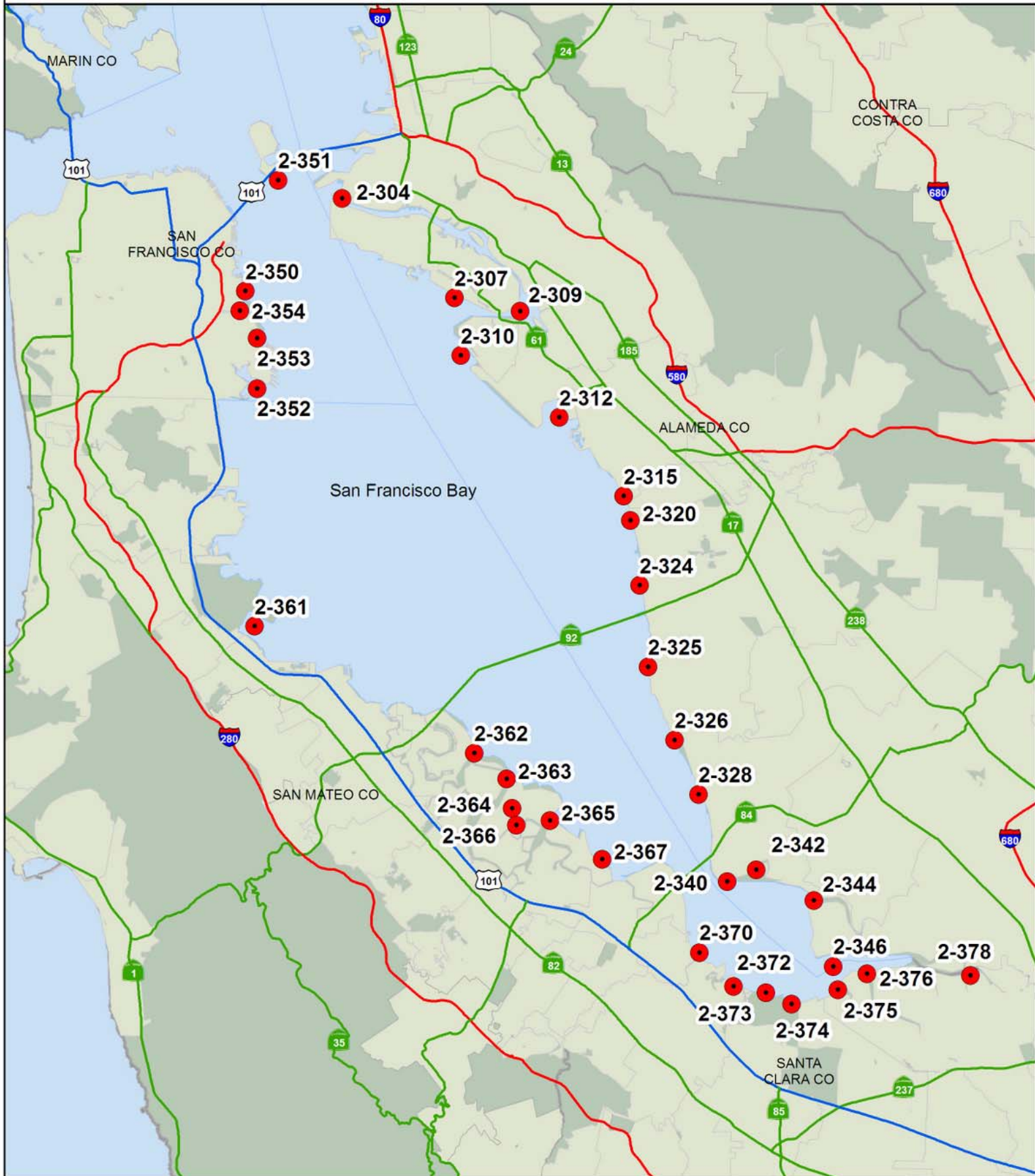


# SF Geographic Response Area 3 South Bay Environmentally Sensitive Sites



● Sensitive Sites

0 2.5 5 10 Miles

Mike Schommer (OSPR) & Greg Ewing (OSPR)  
Date: May 2, 2011

## Section 9843 – GRA 3 South Bay

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Alameda County  
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Santa Clara County

9843.5 Shoreline Access

### GRA 3 Site Index/Response Actions

Site ID	Priority	Site Name	Assignment	Date/Time Required	Date/Time Completed
2-304		Middle Harbor Shoreline Park			
2-307		Alameda Eelgrass Beds			
2-309		San Leandro Bay			
2-310		Bay Farm Island Eelgrass Beds			
2-312		Oyster Bay Marshes			
2-315		San Lorenzo Creek, Bunker & N Marshes			
2-320		Oro Loma Marshes			
2-324		Cogswell, Hayward, and HARD Marshes			
2-325		Eden Landing Ecological Reserve – Alameda Creek			
2-326		Coyote Hills Slough – Alameda Flood Control Channel			
2-328		Ideal and USFWS N-5 Marshes			
2-340		Dumbarton Point Marsh/Mudflat			
2-342		Newark/Plummer Creek			
2-344		Mowry Slough			
2-346		Coyote Creek			
2-350		San Francisco South Collection			
2-351		Yerba Buena Island			
2-352		South Basin, Hunters Point			
2-353		Heron's Head Park – India Basin			
2-354		Islais Creek – Pier 94 Saltmarsh			
2-361		Airport Mudflat			
2-362		Belmont Slough			
2-363		Steinberger Slough			
2-364		Bair Island			
2-365		Redwood Creek			
2-366		Corkscrew Slough			
2-367		Greco Island/Ravenswood Slough			
2-370		Palo Alto Marsh			

2-372		Charleston and Mayfield Sloughs			
2-373		Mountain View Slough			
2-374		Stevens Creek			
2-375		Guadalupe Slough			
2-376		Alviso Slough			
2-378		Mallard Slough			

# Summary of GRA 3 South Bay Anchorage 9 Response Resources by Site and Sub-Strategy

Site	Site Name													
sub-strategy	PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT													
	Harbor	Swamp	Other	Sorbant	Anchoring	Boom	Skiff	Skimmer	Special Equipment	(and notes)	deploy	Staff t		
	Boom	boom	boom	TYPE	boom	No	type of gear	No	Type	No	and kinds	staff	tend	
<b>2-304</b>	<b>Middle Harbor Shoreline Park</b>													
.1	Exclude/Deflect oil from embayment by deflection to collection.													
	2500	0	0		0	7	7/22+ Danforth	2	1	0	SSS	0	7	2
.2	Backup initial exclusion strategy when strong winds or wave conditions are likely to move oil past initial exclusion deplo													
	2500	0	0		2500	7	7/22+ Danforth	2	1	0	0	0	7	2
<b>2-307</b>	<b>Alameda Eelgrass Beds</b>													
.1	Assess need for protective booming: Eelgrass is only vulnerable at very low tides when eelgrass tops are exposed to flo													
												1		
.2	Deflect oil past eelgrass bed and toward collection / protection deployments of San Leandro Bay: 2-309.													
	3000				12	12/22+/danforth		2	0			6		
<b>2-309</b>	<b>San Leandro Bay</b>													
.1	Exclusion/deflection to shoreside collection at Bay Farm Island Bridge.													
	1200	300			200	5	5/22+/daforth & chain	2	1	0	portable	Bboat: very shallow draft	8	
.2	Deflection away from Elsie Romer Bird Sanctuary to collection in the San Leandro Channel.													
	1500				4	4/22+/danforth		2	1	0	sps		8	
.3	Exclude oil from entering the bay via Oakland Estuary.													
	3000				100	10	10/22+/danforth & chain	2	1	1	SPS or			
.4	collect / ground oil washing along Alameda Beach toward Elsie Romer Bird Sanctuary													
	0	300	50	OS	50	3	12#+ anchors	0	1	0	0		2	
.5	Collection by skimming - as needed													
	0	100	0		0	0		0	0	1	SSS	0		
<b>2-310</b>	<b>Bay Farm Island Eelgrass Beds</b>													
.1	Assess need for protective booming: Eelgrass is only vulnerable at very low tides when eelgrass tops are exposed to flo													
												1		
.2	deflection boom from the runway point to divert oil borne on currents past cove.													
	1000				6	6/22#+ danforths/ 15' chain		1	1			4		
.3	Maximize oil capture at this locale with deflection to shore skimming unit.													
	2000	2000			9	9/22#+/danforth & chain + stak		2	2	1	SSS	8		
<b>2-312</b>	<b>Oyster Bay Marshes</b>													
.1	Exclude oil from entering the marshes. Should oil enter the marshes, contain oil to the smallest possible area													
	850	0			0	6	2/12#+ danforths +4/ stakes	0	2			4		
.2	Exclude oil from salt marsh at the southern end of Oyster Bay Regional Shoreline.													
	2000	0	0		0	6	22# danforths	1	2			6		
.3	Oil Recovery by skimming													
	0	0	0		0	0		0	0	3	SSS	3 vac trucks		
<b>2-315</b>	<b>San Lorenzo Creek, Bunker and North Marshes</b>													
.1	Exclude oil from entering the bay diked marshes and tidal channels. Should oil enter the marsh or channels contain oil t													
	600	950	0		300	8	20#	0	2	0	15 stakes	8		
.2	Exclude oil from entering the bay front cordgrass marsh. Should oil enter the marsh contain oil to the smallest possible													
	3000	0	0		16	20# w/20' 1/2" chain each		0	4		stakes	12		
.3	Oil Recovery by skimming													
	0	0	0		0	0		0	0		2 SSS/vac truck			
<b>2-320</b>	<b>Oro Loma Marshes</b>													
.1	Exclude oil from entering the Oro Loma Marsh and Frank's Dump Marsh. Should oil enter the marsh, contain oil to the s													
	1800	0	100	OS	200	13	22#+ w/20' 1/2" chain each		4		1 1000' 1/2" anchor line	14	5	
.2	Exclude oil from entering Frank's Dump Marsh, East/West. Should oil enter the marsh, contain oil to the smallest possibl													
	200	0	0		0	2	20# w/20' 1/2" chain each	0	1		1 1000' 1/2" anchor line,	4	5	
.3	Exclude oil from entering Triangle Marsh and West Winton Channel. Protect bayfront pickleweed marsh. Should oil ente													
	1200	0	0		0	6	20# w/20' 1/2" chain each	0	2	0	Very shallow water with obstructions	6	2	
.4	Oil Recovery by skimming													
	0	0	0		0	0		0	0	2	SSS	0		
<b>2-324</b>	<b>Cogswell, Hayward, and HARD Marshes</b>													
.1	Exclude oil from entering Cogswell, Hayward and HARD marshes. Should oil enter the marshes, contain oil to the smalle													
	2600	1000	0		0	0	9/22+ & 14/12+ danforth	2	4	0	0 bboat: shallow, strandable, stakes	14	2	
.2	Exclude oil from entering interior of Cogswell Marshes. Should oil enter the marshes, contain oil to the smallest possibl													
	1400	0	0		0	0	6/22+ danforths & 8/12+ danfo	1	2	0	0 bboat: shallow, strandable. Stakes	6		
.3	Exclude oil from Johnson's Landing marshes													
	0	1000	0		0	0	4/22+danforths & 6/12+ danfor	0	2	0	0 bboat: shallow, strandable. Stakes	6		
<b>2-325</b>	<b>Eden Landing Ecological Reserve -Alameda Crk</b>													

Site	Site Name													
sub-strategy	PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT													
	Harbor	Swamp	Other	Sorbant	Anchoring	Boom	Skiff	Skimmer	Special Equipment	(and notes)	deploy	Staff	t	
	Boom	boom	boom/TYPE	boom	No	type of gear	boat	No	Type	No	and kinds	staff	tend	
<b>.1</b>	<b>Primary: Exclude oil from entry channels by booming and closing tide gates at bay front.</b>													
	2400			1600	17	7-22#+& 10-15#+/20'1/2"chain	2	1					7	
<b>.2</b>	<b>Protective booming of Whale's Tail Marsh and pocket marsh south of HWY 92.</b>													
	11300	0	0	10000	25	22#+ danforth	4	3	0	0			23	
<b>.3</b>	<b>Collection - develop or enhance skimming at mouth of old Alameda Creek when substantial oil is present.</b>													
	300	50	0	50	5	15#+ danforths	0	1	1	SSS	1 storage tank	3	2	
<b>.4</b>	<b>For inland spills from upstream Old Alameda Creek, collect oil at east creek crossing.</b>													
	0	500	0	0	10	4 12#+ anchors + 6 stakes	0	0	1	SSS	0			
<b>2-326</b>	<b>Coyote Hills Slough Marshes</b>													
<b>.1</b>	<b>Primary: Exclusion booming when oil threat is from bay.</b>													
	2700			500	17	2 22#+ & 5 12#+ danfth & 10 s	1	2					10	
<b>.2</b>	<b>Backup primary bay exclusion: secondary layer of exclusion booming for oil threat from bay under windy conditions or</b>													
	2700				7	2 22#+ & 5 12#+ danft & heav	1	2					7	
<b>.3</b>	<b>Skimming operations at this site. Natural skim pocket with access just south of mouth.</b>													
	600	100	OS	400	12	2 12#+ danfth & 10 stakes		1	1	SSS	2 storage tank or vac truck, light.	3	2	
<b>.4</b>	<b>Inland oil threats: exclusion, deflection, collection.</b>													
	700	100	OS	700	15	5 12#+ danfth & 10 stakes		1	1	SSS	2 storage tank or Vac Truck, lights	3	2	
<b>2-328</b>	<b>Ideal and USFWS N-5 Marshes</b>													
<b>.1</b>	<b>Deflection booming. Deployment of this strategy should be followed by strategy 2 or 3, as time and resources permit.</b>													
	2000		50 OS	100	6	20#w/20'1/2"chain each	1	2			stakes			
<b>.2</b>	<b>Exclude oil from entering Ideal Marsh. Should oil enter the marsh, contain oil to the smallest possible area of the marsh.</b>													
	6500	1000	0	0	22	20# w/20' 1/2" chain each	0	6	0		stakes			
<b>.3</b>	<b>Oil Recovery by Shoreside skimming</b>													
	0	0	0	0	0		0	0	0	vos	0			
<b>2-340</b>	<b>Dumbarton Point Marsh/Mudflat</b>													
<b>.1</b>	<b>Exclude oil from entering marsh front, mudflat, and small channels to the marsh interior.</b>													
	0	2000					2	3					10	
<b>.2</b>	<b>Deflection Booming</b>													
	3000				20	20-25#w/10'chain each	3	1					11	
<b>.3</b>	<b>Protection booming of shoreline</b>													
	0			8000			5	3			shovels, 2,000' 3/8" line		18	
<b>2-342</b>	<b>Newark/Plummer Creek</b>													
<b>.1</b>	<b>Exclusion/Diversion boom to prevent oil from entering channel between bay and site.</b>													
	8000	1000		5000	40	40-25#w/10'chain each	14	4	1				18	
<b>2-344</b>	<b>Mowry Slough</b>													
<b>.1</b>	<b>Deflect oil from marshes to be recovered on-water by skimmers. Prevent oil from entering the slough.</b>													
	1000	10000		50	50-25#w/10'chain each		4	3	1 self pr	hovercraft			18	
<b>2-346</b>	<b>Coyote Creek</b>													
<b>.1</b>	<b>Deflect oil away from marshes, keep oil in deep water channel &amp; skim</b>													
	8000	200		30	many large		8	3	3 SPS				30	
<b>.2</b>	<b>exclusion of mouths of small tidal channels to inner marshes.</b>													
	0	400		400	25	many + stakes	1	1					8	
<b>.3</b>	<b>Protective booming of windward shores to prevent oil from being carried into marshes by wave and tidal action</b>													
	0	4000	4000	SN										
<b>2-350</b>	<b>San Francisco Southerly Collection/Economic Sites</b>													
<b>.1</b>	<b>Economic Objective: Exclude from intakes pier 72 - stop oil from entering the power plant cooling water intake.</b>													
	1000			3	22#+		1	1					8	
<b>.2</b>	<b>Deflection to Collection for shoreside skimming</b>													
	600	0	0	100	0		1	1	1	SSS	0		5	
<b>2-351</b>	<b>Yerba Buena Island</b>													
<b>.1</b>	<b>Protective booming of beach and rocks used by seals.</b>													
	3000			7	7/25# w/ 20' 1/2" chain		3	1		1	3000' 1/2" anchor line		11	
<b>2-352</b>	<b>South Basin, Hunters Point</b>													
<b>.1</b>	<b>Exclusion/protection booming to prevent oil from reaching marsh in South Basin or beaches at Candlestick Point.</b>													
	3500			5	5 / 22+ / Danforth with chain		3	0	2	SFS/SS	*shallow draft Bboat		15	
<b>.2</b>	<b>Deflect oil away and past site.</b>													
	500			2	2/22+ / danforth		1	0			*shallow water Bboat		3	
<b>2-353</b>	<b>Heron's Head Park - India Basin</b>													
<b>.1</b>	<b>Exclude oil from entering small tidal inlets to inner ponds and lagoons.</b>													
	0	200		200	12	stakes							2	

Site	Site Name													
sub-strategy	PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT													
	Harbor	Swamp	Other	Sorbant	Anchoring	Boom	Skiff	Skimmer	Special Equipment	(and notes)	deploy	Staff	t	
	Boom	boom	boom/TYPE	boom	No	type of gear	boat	No	Type	No	and	kinds	staff	tend
<b>.2</b>	<b>Deflect when oil is likely to enter India Basin, such as easterly winds, deflect oil away from site to south shore. Protect e</b>													
	2500				4	4/22+/danforths & stakes	4	1					12	
<b>2-354</b>	<b>Islais Creek - Pier 94 Saltmarsh</b>													
<b>.1</b>	<b>Exclude oil from entering inlet and protect site from oil.</b>													
	1000	50		50	3	3/22+/danforths & stakes	1	1					3	
<b>2-361</b>	<b>Airport Mudflat</b>													
<b>.1</b>	<b>Exclude oil from entering slough openings and cove.</b>													
	8200				35	35/20-40/danforth w chain	4	4		4 shallow draft boomboats			28	
<b>2-362</b>	<b>Belmont Slough</b>													
<b>.1</b>	<b>Exclude/collection oil fom entering Belmont Slough.</b>													
	4000	200			18	18/40/ Danforht	3	0					14	
<b>.2</b>	<b>Protective booming of bayfront tidal marsh</b>													
	6000				35	35/22+/Danforth	2	3					16	
<b>.3</b>	<b>For Collectible oil quantities oil use SPS skimmer</b>													
	0	0	0		0	0	0	0	1	SPS	0			
<b>2-363</b>	<b>Steinberger Slough</b>													
<b>.1</b>	<b>Exclude/collect oil from entering Steinberger Slough</b>													
	3500	500	50	OS	50	16 16/22+/danforth & chain	2	1		Bboat: very shallow draft			13	
<b>.2</b>	<b>For Collectible oil quantities, use SPS skimmer</b>													
	0	0	0		0	0	0	0	1	SPS/SF	0			
<b>2-364</b>	<b>Bair Island</b>													
<b>.1</b>	<b>Exclude oil from entering Bair Island: close openings to interior.</b>													
	0	200			200	3 3/22+/danforth c chain	1	1		very shallow Bboat			5	
<b>.2</b>	<b>Protective booming of exposed marsh frontage.</b>													
	0	4000	TBB		17	17/22+/danforth c chain & line	2	1		Very shallow water Bboat				
<b>2-365</b>	<b>Redwood Creek</b>													
<b>.1</b>	<b>Deflect past, Deflect to collection, Protective boom shoreline.</b>													
	3000	8000			2000	50 35/22+ & 15/40+/danforth w ch	6	3		very shallow Bboats			28	
<b>.2</b>	<b>For Collectible oil quantities, use SPS skimmer</b>													
	0	0	0		0	0	0	0	1	SPS/SF	0			
<b>2-366</b>	<b>Corkscrew Slough</b>													
<b>.1</b>	<b>Exclude oil from entering Corkscrew Slough. Corkscrew Slough is an interior Slough between Steinberger Slough and R</b>													
	0	1200			800	1515 / 22+/ Danforth w chain & st	2	0		very shallow Bboats			5	
<b>2-367</b>	<b>Greco Island/Ravenswood Slough</b>													
<b>.1</b>	<b>exclude oil from entering main sloughs and outer margin bay approach booming.</b>													
	8000	2000			2000	60 60/22+/danforths & stakes	6	10	0	very shallow Bboats			40	
<b>.2</b>	<b>Exclusion/protection of bay marsh front of Greco and Ravenswood Isls.</b>													
	0	0	10000	TBB	0	50 stakes	6	2	0	20				
<b>2-370</b>	<b>Palo Alto Marsh</b>													
<b>.1</b>	<b>Exclude oil from entering the entrances to Palo Alto Marsh and San Francisquito Creek, if time to impact does not permit</b>													
	500	500			500		1	3					9	
<b>.2</b>	<b>Protective booming of marsh front to keep oil from impacting marsh and mudflats.</b>													
	10000	1000			1000	60 50-60 / 22#+/danforths	6	3		shallow draft bombast			38	
<b>2-372</b>	<b>Charleston and Mayfield Sloughs</b>													
<b>.1</b>	<b>Deflect oil away from marshes to skimmers.</b>													
	2500				500	7 7/25#+/danforth	2	1	2	SSS	Shallow draft Bboats & skiffs		13	
<b>.2</b>	<b>Exclude oil from entering Charleston Slough</b>													
	0	1200			1200	5 5/25+/danforths	1	1						
<b>.3</b>	<b>Close all tide gates and salt pond intake structures to exclude oil from expanding to inner marshes and impoundments.</b>													
	0												2	
<b>2-373</b>	<b>Mountain View Slough</b>													
<b>.1</b>	<b>Exclude oil from entering Slough and small marsh channels.</b>													
	0	1500			4000	12 12/22+/danforth c chain; stake	0	2		hovercraft or air boat may be necessary			7	
<b>.2</b>	<b>Shore line protection booming.</b>													
	0	2000			4	4/22+/danforth ; stakes	0	2		hovercraft or airboats may be necessary			8	
<b>2-374</b>	<b>Stevens Creek</b>													
<b>.1</b>	<b>Exclude oil from entering the creek. Deflect oil down-coast.</b>													
	0	400			800	8 anchors & stakes	0	2					4	
<b>.2</b>	<b>Protective booming of marsh front</b>													
	0	7000	SN		7000									

Site	Site Name														
sub-strategy	PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT														
	Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No			Boom boat	Skiff	Skimmer No	Special Equipment and	Equipment kinds (and notes)		deploy staff	Staff tend
2-375	Guadalupe Slough														
.1	-	Exclude oil from entering Guadalupe Slough and adjacent marshes.													
	2500	7500						2	2	2	SPS or S			32	
.2	-	Protective booming of bayfrontage marshes from oiling and oil intrusion.													
	0	1000						0	2					8	
2-376	Alviso Slough														
.1	-	Collection booming to prevent oil from entering Alviso Slough.													
	1000	2000		2000	10	Anchors and stakes		0	2	2	SFS			9	
.2	-	Deflect oil past slough and keep oil in Coyote Creek for skimming.													
	0									1	SFS				
.3	-	Protective booming of marsh front near mouth.													
	0														
2-378	Mallard Slough														
.1	-	Exclusion booming at mouth Coyote Creek. Collect oil at Coyote Creek/Alviso Slough.													
	3500			9	9/22+/danforth			2	2	1	SPS			14	

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**2-304 -A Site Summary- Middle Harbor Shoreline Park****2-304 -A**

County: **Alameda**  
USGS Quad: **Oakland West**

Thomas Guide Location  
SF Bay  
NOAA Chart: **18650**

Latitude N  
37° 48.3'  
Longitude W  
122° 19.5'

Last Page Update : 12/9/2010

**SITE DESCRIPTION:**

Middle Harbor consists of the cove inside the breakwater and Western Pacific Mole north to Seventh Street and encompassing beach and riprap habitat. This site is the former Oakland Naval Supply Depot and is now under management of The Port of Oakland. The land and restoration funds donated by the Port of Oakland. The shallow cove consists of mudflats, sand/gravel beachfront and riprap. The site has been restored by the Port of Oakland offering pocket sand beaches, and salt marsh restoration in progress along southeastern edge. The northern edge and southern boundary are primarily riprap habitat.

**SEASONAL and SPECIAL RESOURCE CONCERN**

The primary concern at this site is the presence of T&E species: black rails, clapper rails, least terns and various migratory species and their respective habitat.

**RESOURCES OF PRIMARY CONCERN**

Site is currently under restoration and habitats at highest risk are saltmarsh near the southeast corner on Middle Harbor area and mudflats when exposed at low tides.

Mudflats are foraging habitat for waterfowl, wading birds and shorebirds during low tide. Salt marsh provides habitat for foraging and rearing for many species of birds and potentially small mammals. Beach and dunes also provide foraging and roost habitat for many species of birds. The marshes are nesting habit for endangered California clapper rail, herons, egrets and resident shorebirds. Endangered California least terns are known to occur seasonally (summer) in the area. The site lies within Black Rail projected range within the Bay Area. Song sparrow (Special Status) are known to utilize adjacent tidal salt and brackish marshes.

The salt marsh provides habitat for the Salt Marsh Harvest Mouse and California Clapper ail (state & federally endangered).

Patches of eelgrass varies seasonally. Salt marsh restoration in progress along southeast shoreline.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Site is built on the site of the former Oakland Naval Supply Depot. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
E	Jeff Jones Environmental Scientist	Port of Oakland	(510) 627-1537

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-304 -A Site Strategy - Middle Harbor Shoreline Park

County and Thomas Guide Location

SF Bay Alameda

NOAA CHART

18650

## 2-304 -A

Latitude N

Longitude W

37° 48.3' 122° 19.5'

Last Page Update :

### CONCERNS and ADVICE to RESPONDERS:

The main concerns are the very sensitive marshes and mudflats which support listed habitats. These habitats are almost impossible to cleanup. The intention is to prevent oil from entering the marshes by diverting it to collection sites on water. Avoid disturbing or trampling marsh vegetation or trampling oil into the substrate.

### HAZARDS and RESTRICTIONS:

Port of Oakland may have heavy big rig traffic getting into/out of the terminal facilities. There are several unmarked underwater obstructions near the northwest edge of the Pacific Mole. Average water depth is four feet depending on tidal stage.

## SITE STRATEGIES

Strategy 2-304.1 Objective: Exclude/Deflect oil from embayment by deflection to collection.

Deploy a continuous line of harbor boom (2500' 9X9+ Hboom) across the harbor beginning from the Western Pacific Mole north to the sheetpile breakwall, making a 100° bend and terminating at the apex point of the Portview Park. Provide shoreline boom seal for tidal changes. A collection pocket may be set up at the end of the Mole or Portview Park to collect oil via vacuum truck or skimmer. Advise Incident Command if collectable quantities of oil are present. BEWARE of underwater obstructions near the tip of the Western Mole as indicted in site diagram.

Strategy 2-304.2 Objective: Backup initial exclusion strategy when strong winds or wave conditions are likely to move oil past initial exclusion deployment.

Repeat the deployment with a second deployment (2500' 9X9+ Hboom). Back Hboom with 2500' absorbent boom and change out absorbent boom as necessary.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-304.1	2500	0	0	0	7 7/22+ Danforth	2	1	0 SSS	0	7	2
2-304.2	2500	0	0	2500	7 7/22+ Danforth	2	1	0	0	7	2

## LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

From I-80 West take the last offramp before the Bay Bridge Toll aka West Grand/Maritime St. Keep right at the fork and follow signs to Maritime St/Harbor Terminals/7th St. Continue on Navy Roadway & turn right on 7th St. Continue to Middle Harbor Shoreline Park located on the corner of 7th and Middle Harbor Rd. Middle Harbor consists of the cove inside the breakwater and Western Pacific Mole north to Seventh Street and encompassing beach and riprap habitat. This site is the former Oakland Naval Supply Depot and is now under management of The Port of Oakland. The land and restoration funds donated by the Port of Oakland.

**LAND ACCESS:** Access from 7th St and Middle Harbor Rd. Locked gates at night

**WATER LOGISTICS:** Ave depth of middle harbor is 4 feet. Beware of underwater hazards  
Limitations: depth, obstruction

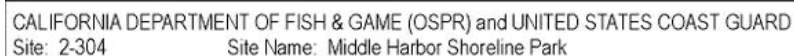
Launching, Loading, Docking and Services Available: Jack London Aquatic Center is the nearest launch/docking to the South located at 1st street/Embarcadero Way in Oakland.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

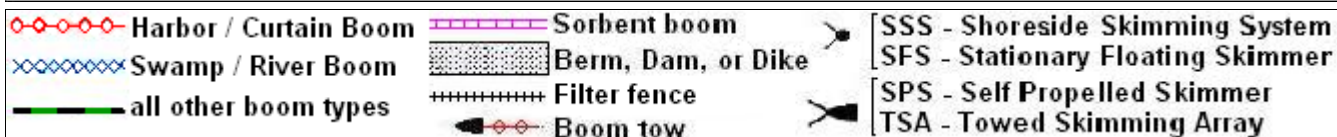
Restrooms onsite, parking max at 30 vehicles.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



M. Schommer (OSPR) & Greg Ewing (OSPR)  
Date: March 22, 2011



## 2-307 -C/A Site Summary- Alameda Eelgrass Beds

2-307 -C/A

County: **Alameda**  
USGS Quad: **Oakland West**

Thomas Guide Location

Latitude N  
3 7 45  
Longitude W  
122 16

NOAA Chart: **18649/18650 Entrance to SF Bay**

Last Page Update : 10/1/2002

### SITE DESCRIPTION:

The bed extends from near the entrance to Ballena Bay to the southerly extension of Park Street in Alameda. The eelgrass beds south of the island of Alameda total about 30 acres. The densest portion of the bed is near Ballena Bay and becomes more sparse along a sand bar running to the east about 150 yards off shore. The beds are in 8 to 10 feet of water and would not necessarily be exposed to oil on all low low tides.

### SEASONAL and SPECIAL RESOURCE CONCERN

This eelgrass bed has A-level protection priority when exposed. Herring spawning in eelgrass November through April.

### RESOURCES OF PRIMARY CONCERN

Oil readily sticks to eelgrass. The beds are an important spawning substrate for herring from November through April, and eelgrass is the sole food source for black brant during this time.

Elsie Roemer Bird Sanctuary is located at the southeast end of Crown Beach on Alameda, west of the Alameda-Bay Farm Island Bridge. The endangered California clapper rail breeds here. Brown pelican and least tern forage here.

### CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

### KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
E/T	Crown Beach Park Sup.	East Bay Regional Park District	(510) 544-3171
B/T		NOAA, National Marine Fisheries Service	(562) 980-3232
B		Baylands Nature Preserve	(650) 617-3156
B	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
B	Baylands Nature Preserve Office	Baylands Nature Preserve	(650) 329-2506
B/T	Liam Davis	CA Dept. of Fish & Game	(707) 644-2812
E	EBRP Dispatch EBRP	East Bay Regional Park District	(510) 881-1833
E/T	Anne Rockwell Shoreline Parks Manager	East Bay Regional Park District	(510) 544-3172

### ADDITIONAL SITE SUMMARY COMMENTS:

## 2-307 -C/A Site Strategy - Alameda Eelgrass Beds

County and Thomas Guide Location

Alameda

NOAA CHART

18649/18650 Entrance to SF Bay

2-307 -C/A

Latitude N

Longitude W

3 7 45

122 16

Last Page Update : 10/1/2002

### CONCERNS and ADVICE to RESPONDERS:

The concern is that oil will readily stick to any eelgrass blades which come in contact with the oil. The oil is disruptive to the eelgrass and would be damaging to any herring eggs spawned during the herring spawning season November to April. The strategy is to deflect the oil past this area to currents leading to collection setup to the east in San Leandro Channel.

### HAZARDS and RESTRICTIONS:

Water is relatively shallow.

### SITE STRATEGIES

Strategy 2-307.1 Objective: Assess need for protective booming: Eelgrass is only vulnerable at very low tides when eelgrass tops are exposed to floating oil.

Biological staff must assess this site to determine if eelgrass is at risk. Because this bed is fairly deep, eelgrass tops are rarely, if ever, exposed to floating oil, and then only at very low tides. Oil readily sticks to floating eelgrass tops, and once eelgrass gets fouled with oil, oil becomes a subsurface threat to fish and other organisms which thrive in this cover. Scientific staff must review tidal information to see if minus tides less than -0.5 may result in eelgrass exposure, and must conduct on-site evaluation as necessary. Any booming recommendations should be expedited through ICS to operations.

Strategy 2-307.2 Objective: Deflect oil past eelgrass bed and toward collection / protection deployments of San Leandro Bay: 2-309.

Cascade 3000 ft of 9X9+ Hboom from the mouth of Ballena Bay at a southeasterly angle to direct oil past the eelgrass beds and the southern side of Alameda Island toward the San Leandro channel.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-307.1										1	
2-307.2	3000				12 12/22+/danforth	2	0			6	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

This site is accessible only by water. The beds are about 200 yards from Alameda Marina mouth. Follow the signs to Alameda from I-880. Exit on Webster and continue to the terminus of Webster at Crown Beach: right (west) on Central to 4th Street to Ballena Bay and Ballena Isle Marina or left to 8th Street which becomes Shore Line Drive. The bed extends from near the entrance to Ballena Bay to the southerly extension of Park Street in Alameda.

**LAND ACCESS:** ready access to the nearby shoreline

**WATER LOGISTICS:** None known

Limitations: depth, obstruction

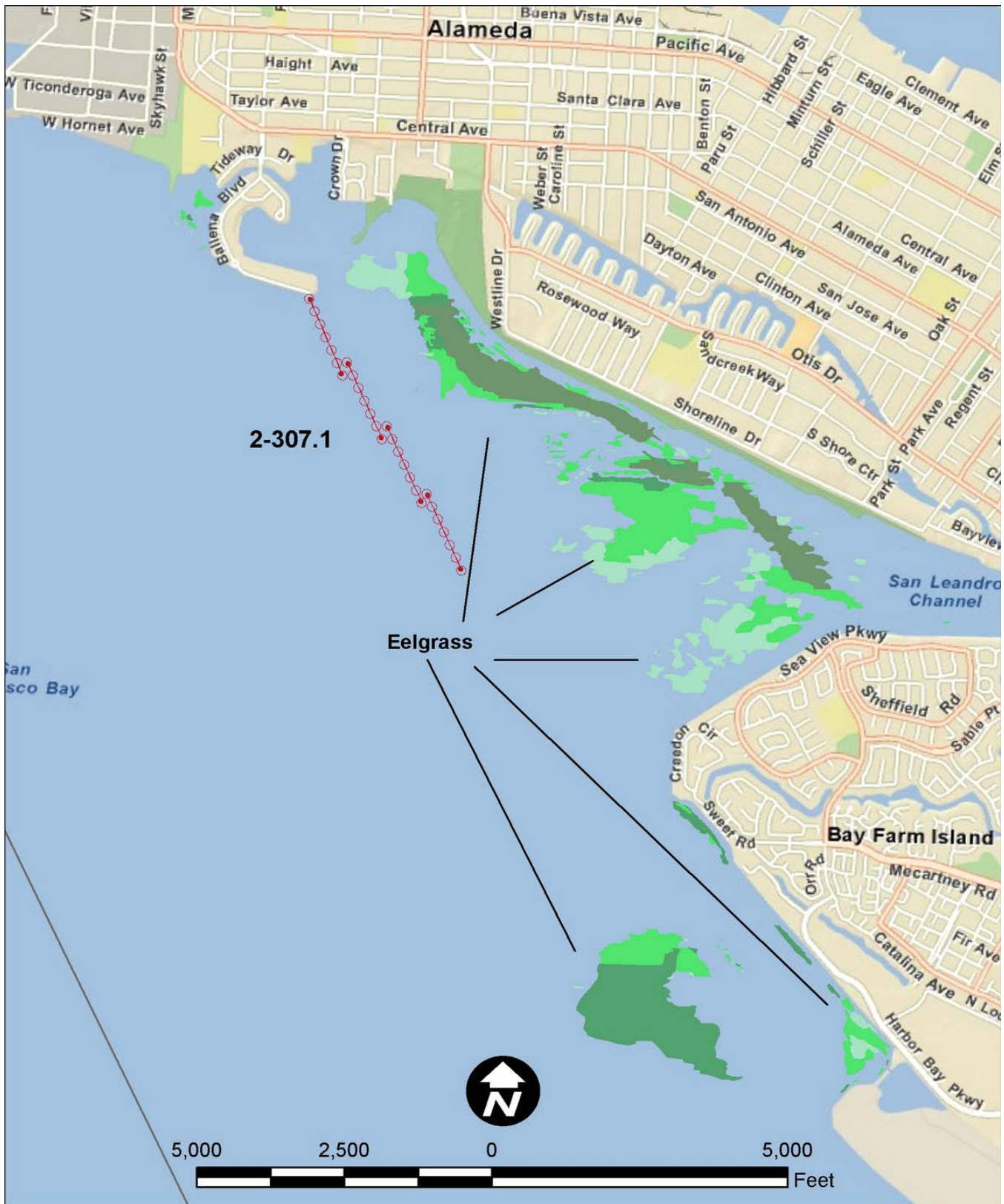
Launching, Loading, Docking and Services Available: Public launching at the end of Lincoln off of Central. Docking available at Ballena Isle Marina just to the west.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

The nearby Ballena Isle Marina is the most convenient boat facility to support this operation. Crown Beach (EBRP) may be useful for staging. The Alameda Ferry Slip on Bay Farm Island to the south is also a good site to stage boom and support equipment. Also, San Leandro Harbor, just south of the Oakland Airport is a small boat harbor accommodating 500 boats with a minimum of 15 guest slips. The channel leading into the harbor is dredged and has a controlling depth of 5-6 ft. It is marked by day beacons and two lights, and the northernmost light has a fog signal. There is a yacht club and the Harbor Master's office is on the southwest side.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD  
 Site: 2-307 Site Name: Alameda Eelgrass Beds  
 Source: basemap provided by ESRI ArcGIS Online Services

Mike Schommer (OSPR) & Greg Ewing (OSPR)  
 Date: Feb. 22, 2011

County: **Alameda**  
 USGS Quad: **Oakland E., Hntrs Point, San Leandro**

Thomas Guide Location

Latitude N

Longitude W

3 7 45

122 13

NOAA Chart: **18649/18650 Entrance to SF Bay**

Last Page Update : 10/1/2002

**SITE DESCRIPTION:**

This site includes all of San Leandro Bay and the San Leandro Channel, including Elsie Roemer Bird Sanctuary located at the southeast end of Crown Beach on Alameda, west of the Alameda-Bay Farm Island Bridge. This shallow bay between Alameda and Bay Farm Islands has extensive mudflats and well developed saltmarsh, including the 50-acre Arrowhead Marsh at the south end. The west and south margins are part of Martin Luther King Jr. Regional Shoreline - EBRP. The Oakland Estuary feeds into the north end, and San Leandro Channel feeds in from the west. San Leandro Creek empties to the bay at its southeast corner. The Airport Marina is along the southwest margin.

**SEASONAL and SPECIAL RESOURCE CONCERN**

The saltmarshes, mudflats, and bird sanctuary are an "A" priority all year. Several Special Status Species including the endangered California clapper rail, the endangered salt marsh harvest mouse, and rare sensitive plants are present in the 50-acre Arrowhead Marsh.

**RESOURCES OF PRIMARY CONCERN**

The main habitat of concern is the 50-acre Arrowhead Marsh. There are also cordgrass marshes along the margins. There is a restored marsh SE of Arrowhead Marsh - this marsh was created as mitigation for the land fill operation that created the parking lots and truck terminals at the end of Swan Way and Pardee Dr. There are extensive mudflats. The gravelly substrate along the southwest margin supports extensive cockle beds. All these habitats are very sensitive to oiling and cleanup is very impractical.

All of the marshes, mudflats, and shallow water areas within San Leandro Bay are habitat for waterfowl, wading birds, and shorebirds, and the Elsie Roemer Bird Sanctuary is located at the southeast end of Crown Beach on Alameda, west of the Alameda-Bay Farm Island Bridge. The endangered California clapper rail breeds here. Brown pelican and least tern forage here.

The endangered saltmarsh harvest mouse also populates these marshes.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

There are probably historic and cultural sites present. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
ELO	EBRP Dispatch EBRP	East Bay Regional Park District	(510) 881-1833
E/T	Anne Rockwell Shoreline Parks Manager	East Bay Regional Park District	(510) 544-3172
E/T	Kevin Takei Park Supervisor	East Bay Regional Park District	(510) 544-3171
E/T	Ralph Trujillo Park Supervisor	East Bay Regional Park District	(510) 544-3082

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-309 -A Site Strategy - San Leandro Bay

County and Thomas Guide Location

Alameda

NOAA CHART

18649/18650 Entrance to SF Bay

## 2-309 -A

Latitude N

Longitude W

3 7 45

122 13

Last Page Update : 1/15/2007

### CONCERNS and ADVICE to RESPONDERS:

The main concerns are the very sensitive marshes and mudflats here, which are almost impossible to cleanup. Endangered birds and marsh mice live here. The intention is to prevent oil from entering the marshes by diverting it to collection sites on the north shore of Bay Farm Island near the bridge. Avoid disturbing or trampling marsh vegetation and don't trample oil into the mud.

### HAZARDS and RESTRICTIONS:

Beware of shallows.

### SITE STRATEGIES

#### Strategy 2-309.1 Objective: Exclusion/deflection to shoreside collection at Bay Farm Island Bridge.

Deploy deflection boom across San Leandro Channel using both intertidal barrier boom and harbor boom to move oil to collection areas and exclude oil from San Leandro Bay marshes.

Flood tide - Using 1200 ft. of 9X9+ Hboom and 300 ft of swamp boom (or intertidal barrier boom) connected together, place boom across channel at approximately a 45 deg. Angle. Place intertidal barrier boom on north side of channel across mudflat, extending harbor boom across channel to form a collection pocket on south side of channel at inlet next to the Alameda/Bay Farm Island bridge.

Ebb Tide:- If little to no oil is inside San Leandro Bay; flood tide harbor boom can remain in place. If strong currents exist the boom may be opened, using the boom to line the marshes on either side of the channel, allowing oil to move out of the bay. If a significant amount of oil is present inside the bay; leave existing flood tide harbor boom in place, collect oil on the north bank.

Backup considerations- see substrategy 2-309.5: A secondary line of defense in the San Leandro Channel may be required. This could involve sorbent boom behind harbor boom or additional harbor boom and skimmers working near the bridge. Specific equipment requirements will be determined based on oil, current, and weather conditions during the incident. Advise UC/IC.

#### Strategy 2-309.2 Objective: Deflection away from Elsie Romer Bird Sanctuary to collection in the San Leandro Channel.

Deploy 1500 ft of 9X9+ Hboom from the Park St. jetty on Alameda. Depending on weather and spill conditions, this boom can be used to either deflect oil away from the marsh east of jetty and into channel, or to deflect oil to the sandy beach into a collection area. SPS skimmer in San Leandro Channel may be replaced by portable skimming head operated from shore with vac truck or other shore storage.

#### Strategy 2-309.3 Objective: Exclude oil from entering the bay via Oakland Estuary.

Protective measures on the north channel (Oakland Estuary) entrance to San Leandro Bay may also be necessary depending on the size and location of the spill. Spills in SF Bay should be confronted in the Oakland Inner Harbor to prevent oiling of the inner harbor and San Leandro Bay. Spills in the harbor should be confronted in the Park Street Bridge Reach. Currents in the Park St. Bridge Reach are very fast. Specific strategies have not been developed for these locations, although extensive use and deployment of several thousand feet of harbor boom, boom boats, skimmers and vacuum trucks may be required. Diagonal booming will be necessary to move oil out of swift water to slower shoreside collection pockets and eddies.

#### Strategy 2-309.4 Objective: collect / ground oil washing along Alameda Beach toward Elsie Romer Bird Sanctuary

To contain and collect along-shore transported oil on Alameda Beach, set 300 ft of swamp boom at a diagonal just west of Park St. jetty. Use sorbents and provide for additional oil collection as needed.

#### Strategy 2-309.5 Objective: Collection by skimming - as needed

Best skimming location is at south side of Alameda-Bay Farm Island Bridge in conjunction with 2-309.1. There is a pocket with immediate vehicle access, sea wall, and walkway immediately to the west of bridge footing. This site is well suited for a Shoreside skimming system. Extra boom to reinforce the pocket is recommended.

Skimming with a Self propelled skimmer may be effective upstream from the bridge and particularly in conjunction with strategy 2-309.2 (deflection boom from Park Street jetty at Elsie Romer Bird Sanctuary.) The channel on the south side is favorable to navigation. Shoreside skimming may also work in conjunction with 2-309.2.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
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2-309.1	1200	300		200	5	5/22+/danforth & chain	2	1	0 portable	Bboat: very shallow draft	8
2-309.2	1500				4	4/22+/danforth	2	1	0 sps		8
2-309.3	3000			100	10	10/22+/danforth & chain	2	1	1 SPS or m		
2-309.4	0	300	50 OS	50	3	12#+ anchors	0	1	0	0	2
2-309.5	0	100	0	0	0		0	0	1 SSS	0	

## LOGISTICS

### DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

By vehicle, exit I-880 at Hegenberger Rd and proceed bayward (toward airport). Turn right (north) on Doolittle Dr (Hwy 61) which runs along the west side of San Leandro Bay and crosses the San Leandro Channel. By boat, from the tip of Alameda Island, the bay is at the east end of the Island and may be approached via the Oakland Estuary or, preferably on the south side of the island, via the San Leandro Channel. This site includes all of San Leandro Bay and the San Leandro Channel, including Elsie Roemer Bird Sanctuary located at the southeast end of Crown Beach on Alameda, west of the Alameda-Bay Farm Island Bridge.

**LAND ACCESS:** Good on west shore.

**WATER LOGISTICS:** Exceedingly shallow.

Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: There are launches in Oakland Estuary and at the southwest of Alameda Island at the end of Lincoln St. All services in Oakland Estuary.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Good staging at the foot of Alameda-Bay Farm Island Bridge. Also at Crown Beach (EBRPD), Martin Luther King Regional Shoreline, and Bay Farm Ferry Landing. Field Post at USCG, Alameda. Foss Environmental HQ is at the west end of Alameda.

**COMMUNICATIONS PROBLEMS:**

**ADDITIONAL OPERATIONAL COMMENTS:**



**2-310 -C/A Site Summary- Bay Farm Island Eelgrass Beds****2-310 -C/A**County: **Alameda**

Thomas Guide Location

Latitude N

Longitude W

3 7 44

122 15.5

USGS Quad: **Hunters Point / San Leandro**NOAA Chart: **18649/18650 Entrance to SF Bay**

Last Page Update : 10/1/2002

**SITE DESCRIPTION:**

This site extends from the tip of Bay Farm Island at San Leandro Channel (ferry landing) to the next point south. This reach is a shallow cove with a rip-rap margin and shallow water of up to 15' deep. It is a natural collection area for debris. The eelgrass beds begin about 50 ft off shore and are about 200 yards long.

**SEASONAL and SPECIAL RESOURCE CONCERN**

This eelgrass bed has A-level protection priority when exposed. Herring spawning in eelgrass from November through April.

**RESOURCES OF PRIMARY CONCERN**

The shallow cove is habitat for eelgrass and all associated species. Oil readily sticks to eelgrass. Eelgrass is a favored substrate for herring spawning November through April. It is also the sole food source for black brant during this same period.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

There are probably historic and cultural sites present. For specific information on historic or cultural resources in this area, contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-2494).

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
TB		NOAA, National Marine Fisheries Service	(562) 980-3232
ELBO	City of Alameda, Parks	Alameda, City of, Dept. of Parks and Recreation	(510) 747-7529
EL	City of Alameda, PD	Alameda, City of, Police/non emergency	(510) 747-4700
B	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
TB	Liam Davis	CA Dept. of Fish & Game	(707) 644-2812
B	Elizabeth Petras Office	NOAA, National Marine Fisheries Service	(562) 980-3238

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-310 -C/A Site Strategy - Bay Farm Island Eelgrass Beds

County and Thomas Guide Location

Alameda

NOAA CHART

18649/18650 Entrance to SF Bay

2-310 -C/A

Latitude N

3 7 44

Longitude W

122 15.5

Last Page Update : 12/15/2006

### CONCERNS and ADVICE to RESPONDERS:

Primary concern is oiling of eelgrass and its impacts on wildlife. This is a natural collection area for flotsam and can function as an effective oil collection site. Oil may become imbedded in the riprap.

### HAZARDS and RESTRICTIONS:

Riprap poses slip, trip and fall hazards. Vessels beware of shallows at margins.

### SITE STRATEGIES

Strategy 2-310.1 Objective: Assess need for protective booming: Eelgrass is only vulnerable at very low tides when eelgrass tops are exposed to floating oil.

Biological staff must assess this site to determine if eelgrass is at risk. Because this bed is fairly deep, eelgrass tops are rarely exposed to floating oil, and then only at very low tides. Oil readily sticks to floating eelgrass tops, and once eelgrass gets fouled with oil, oil becomes a subsurface threat to fish and other organisms which thrive in this cover. Scientific staff must review tidal information to see if minus tides may result in eelgrass exposure, and must conduct on-site evaluation as necessary. Any booming recommendations should be expedited through ICS to operations.

Strategy 2-310.2 Objective: deflection boom from the runway point to divert oil borne on currents past cove.

This strategy is most appropriate if very low tides are likely to expose eelgrass. Deploy 1000 ft of 9X9+ Hboom from the point at the end of the runway parallel to the shoreline to deflect oil past the pocket of the cove. This strategy will require heavy anchoring since current is very strong (2+knt at point); previous deployment attempts have failed if not properly anchored.

Strategy 2-310.3 Objective: Maximize oil capture at this locale with deflection to shore skimming unit.

a) Ebb Tide: deploy 1000' 9X9+ Hboom at an angle to direct oil to shore about 200'south of ferry landing. Complete with a lined capture and hold pocket (2000'4X4+Hboom). Line shore with 4X4+ and/or sorbent boom to keep oil from imbedding in riprap. Deploy additional 1000 ft Hboom to cascade oil into collection.

b) Flood Tide: skimmer and collection booms will need to be positioned in the pocket of the cove to effect recovery.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special No and	Equipment or kinds comment	staff deploy	Staff tend
2-310.1											1	
2-310.2	1000				6 6/22#+ danforths/ 15'+ chain	1	1				4	
2-310.3	2000	2000			9 9/22#+/danforth & chain + stakes	2	2	1 SSS			8	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Land access is from I-880: exit at High St, continue south (left) on Doolittle across San Leandro Bay and then continue right (west) on Mecartney Rd bay front, Shoreline Park. By water the site is about a mile southeast from the marina at Robert Crown State Beach. This site extends from the tip of Bay Farm Island at San Leandro Channel (ferry landing) to the next point south.

**LAND ACCESS:** All.

### WATER LOGISTICS:

Limitations: depth, obstruction

Beware of shallows at margins.

Launching, Loading, Docking and Services Available:

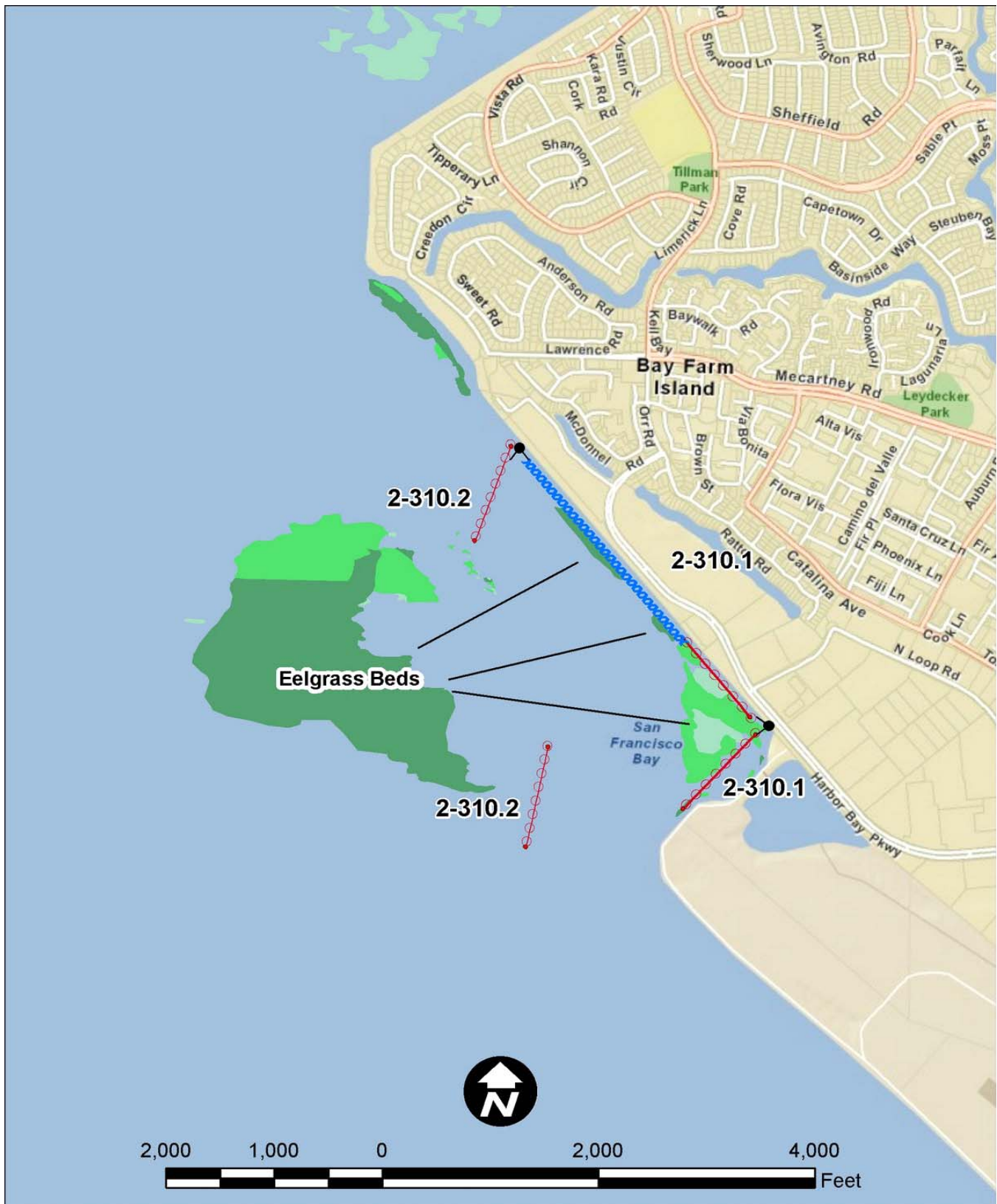
Launch and moorage across at Ballena Isle Marina, Alameda.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Shoreline Park and Crown Beach can provide local field support and deployment sites. EBRP facilities at Crown Beach, Alameda may serve well as a field post.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD  
 Site: 2-310 Site Name: Bay Farm Island Eelgrass Beds  
 Source: basemap provided by ESRI ArcGIS Online Services

Mike Schommer (OSPR) & Greg Ewing (OSPR)  
 Date: Feb. 22, 2011

—○—○—○— Harbor / Curtain Boom  
 —x—x—x—x— Swamp / River Boom  
 — all other boom types

— Sorbent boom  
 — Berm, Dam, or Dike  
 — Filter fence  
 — Boom tow

SSS - Shoreside Skimming System  
 SFS - Stationary Floating Skimmer  
 SPS - Self Propelled Skimmer  
 TSA - Towed Skimming Array

County: **Alameda**  
 USGS Quad: **San Leandro**

Thomas Guide Location  
 AAA Fremont - N

Latitude N  
 37 .71  
 Longitude W  
 122..19

NOAA Chart: **San Francisco Bay, Southern Part**

Last Page Update : 7/1/2005

#### SITE DESCRIPTION:

The site is made up of wetlands at Oyster Bay Regional Shoreline located along the east side of San Francisco Bay, bounded to the northwest by Oakland International Airport, to the east by the San Leandro Davis Street Waste Transfer Station, and to the southwest by San Francisco Bay. The site consists of 4 acres of emergent marsh bordering the Oyster Bay Regional Shoreline to the north and 5 acres of tidally influenced marsh located along the southeast portion of the shoreline.

The marsh in the northern portion of the site occurs on both side sides of the drainage channel and consists primarily of cordgrass. Access should be made through Davis St. gate managed by EBRPD. Access is restricted on the north side of the channel (Oakland Airport property).

The marsh along the southeast portion of the shoreline is bordered to the east by private industrial facilities, and to the south by a mudflat cove where shorebirds are present.

The shallow mudflats in the vicinity of Oyster Bay Regional Shoreline, which provide habitat for numerous shorebirds, may make access for deployment of large boom sections problematic at low tide.

#### SEASONAL and SPECIAL RESOURCE CONCERN

The site is an "A" priority all year.

#### RESOURCES OF PRIMARY CONCERN

The endangered salt marsh harvest mouse, California least tern, and the California clapper rail are known to occur in the general area. This area is used by migratory waterfowl.

#### CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Ohlone cultural sites may be nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880), for specific information on historic or cultural resources in this area.

#### KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
E	EBRP Dispatch EBRP	East Bay Regional Park District	(510) 881-1833
E/T	Anne Rockwell Shoreline Parks Manager	East Bay Regional Park District	(510) 544-3172
E/T	Ralph Trujillo Park Supervisor	East Bay Regional Park District	(510) 544-3082

#### ADDITIONAL SITE SUMMARY COMMENTS:

## 2-312 -A Site Strategy - Oyster Bay Marshes

County and Thomas Guide Location  
AAA Fremont - N Alameda

NOAA CHART  
San Francisco Bay, Southern Part

## 2-312 -A

Latitude N Longitude W  
37 .71 122..19

Last Page Update : 10/1/2005

### CONCERNS and ADVICE to RESPONDERS:

Should oil enter the marsh, expect injury and death of marsh vegetation, small mammals, shorebirds and waterfowl. Avoid trampling marsh vegetation and trampling oil into mud.

### HAZARDS and RESTRICTIONS:

Shallow water, seas to 3 feet. Soft mud.

### SITE STRATEGIES

Boom can be delivered to shore. Site is immediately adjacent to streets and marina. Area is exposed at low tide.

Strategy 2-312.1 Objective: Exclude oil from entering the marshes. Should oil enter the marshes, contain oil to the smallest possible area

- a. Deploy 600 ft of swamp boom having a minimum freeboard of 4 inches and a minimum draft of 4 inches in the tidal channel on the north side of Oyster Bay Regional Shoreline. Deliver the boom by truck. A john boat and 4 people will be needed to deploy the boom. Access is through the Davis Street Waste Transfer Station. A skimmer and portable storage device may be located here if significant quantities of oil can be accumulated.
- b ). Deploy 250 ft of swamp boom across the mouth of the salt marsh at the southeast corner of Oyster Bay Regional Shoreline. Stakes must be used to keep boom in place. Water is very shallow at low tides. Access is through East Bay Regional Park gate at the northern-most end of Neptune Drive.

Strategy 2-312.2 Objective: Exclude oil from salt marsh at the southern end of Oyster Bay Regional Shoreline.

Deploy 2,000 ft. of 9X9+ Hboom from the southern most point of Oyster Bay Regional Shoreline to Mulford Landing near the intersection of Marina Blvd. and North Dike Rd. One boom boat, two john boats and 6 people will be needed at this site. Angle of boom may be altered to take advantage of wind. Divert oil to an accessible shoreline. A portable skimmer and a vac truck will be needed to recover oil as it accumulates.

Strategy 2-312.3 Objective: Oil Recovery by skimming

If product accumulates as a result of strategies .1 and/or .2, deploy skimmers and vac truck to recover product.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-312.1		850	0	0	6 2/12#+ danforths +4/ stakes	0	2			4	
2-312.2	2000	0	0	0	6 22# danforths	1	2			6	
2-312.3	0	0	0	0	0	0	0	3 SSS	3 vac trucks		

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Take Highway S 880 to Alameda/San Jose. Take Davis Street exit. Proceed west on Davis St., access through the Davis Street Waste Transfer Station. To San Leandro Marina: Take Highway 880 to San Leandro. Take Marina Blvd. exit. Go west on Marina Blvd. to San Leandro Marina.

West bank access can be made through the East Bay Regional Parks trail located on Neptune Drive, just south of the Davis Street Waste Transfer Station. Alternate access to the marsh inlet may be made through Paradise Mechanical, Inc. located at 2600 Williams Drive. The site is made up of wetlands at Oyster Bay Regional Shoreline located along the east side of San Francisco Bay, bounded to the northwest by Oakland International Airport, to the east by the San Leandro Davis Street Waste Transfer Station, and to the southwest by San Francisco Bay.

**LAND ACCESS:** Access for trucks on well maintained, graveled levee roads.

**WATER LOGISTICS:** Shallow draft vessels <3'.

Limitations: depth, obstruction

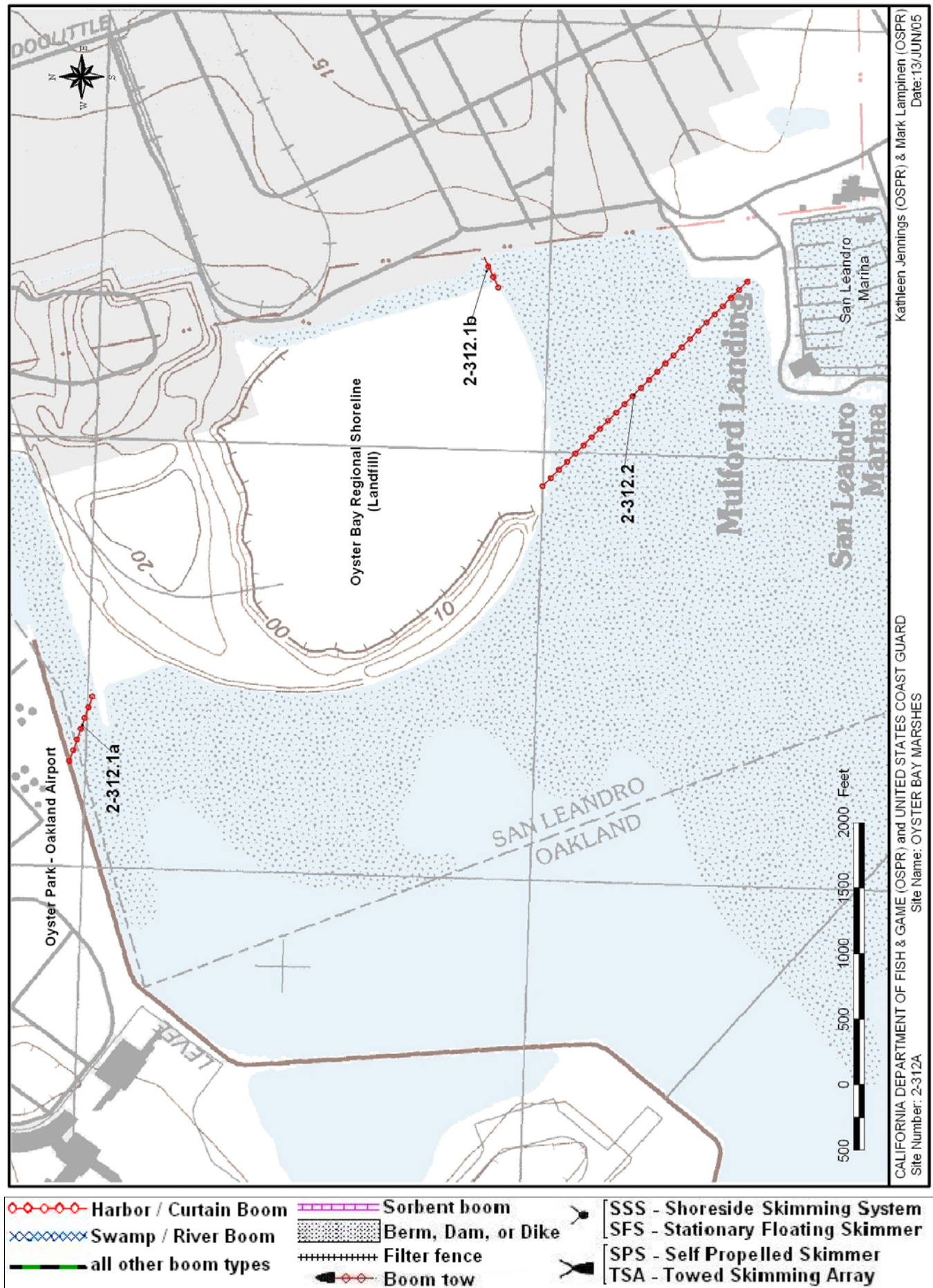
Launching, Loading, Docking and Services Available: Boat launching available at San Leandro Marina. Small skiffs may be launched from levees.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

This is all part of East Bay Regional Park's Hayward Shoreline. A small staging area and access is available at the shoreline office at the west end of W. Winton Ave. Access is also available at the west end of Breakwater Ave. adjacent to Highway 92.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



County:

USGS Quad: **San Leandro**

Thomas Guide Location

AAA Fremont - N Alameda

Latitude N

37 29.0

Longitude W

122 02.0

NOAA Chart:

**San Francisco Bay, Southern Part**

Last Page Update : 10/1/2002

**SITE DESCRIPTION:**

This large contiguous section of bay front marshes, diked marshes and tidal channels/creeks (~150 acres) is located along the east side of San Francisco Bay in San Leandro. The site covers approximately 2.25 miles of shoreline and is bounded on the north by Estudillo Canal and on the south by Bockman Channel at the Oro Loma Sanitary Waste Facility. San Francisco Bay is west of the site and the railroad on the east limits the upstream extent of San Lorenzo Creek.

The shoreline consists of rip rapped levees; a small segment of sand beach outboard of Bunker Marsh; a 3/4 mile long bayfront cordgrass marsh in the southern part of the site; and four separate tidal channels with vegetated banks. At the northern-most portion of the site is Estudillo Canal. Estudillo Canal is dammed approx. 100 yds upstream by a bridge with 12 large (48") culverts with flap gates to prevent bay water from moving upstream. Two small unnamed saltmarshes are present adjacent to the golf course, yet contained by levees. The smaller northern marsh is connected to the bay via a culvert with a flap gate. The gate prevents bay water from flowing into the marsh. The larger marsh is fully tidal, connected to the bay via a 24" culvert with no gate structures. However, there are concrete risers located on the inboard and outboard ends of the culvert with slots for weir boards.

North and Bunker marshes are diked with riprap levee shorelines. North Marsh (94 acres) is bounded by levees but open to the bay via a gate structure of 4 x 48" culverts with grates on either end and screw gates on each. The bayfront cordgrass marsh (28 acres) is exposed to the bay and fronted by a wide tidal mudflat. The largest channel is the San Lorenzo Creek in the middle portion of the site. It's banks are lined by a wide band of marsh vegetation (>75ft) and extend upstream to the railroad tracks (1/2 mile). A tidal slough extends to the north off the mouth of San Lorenzo Creek and cuts through the bayfront marsh. This slough extends northward to Bunker Marsh (26 acres) and other marshes controlled by the City of San Leandro (e.g. Bunker, East, North, and Citation Marshes). The Bunker Marsh levee has an open breach at the south end at this slough. On the south end of the site is Bockman Channel, a narrow and short (<1/2 mile) channel lined on both banks with marsh vegetation (<20ft).

**SEASONAL and SPECIAL RESOURCE CONCERN**

The site is an "A" priority all year.

**RESOURCES OF PRIMARY CONCERN**

Extensive cordgrass marshes and mudflat habitats are present along the entire site. Cordgrass and pickleweed marshes are located closer to the levees, along the banks of the various channels, and interior to the levees of the Bunker and North Marshes.

The endangered California clapper rail and threatened California black rail forage and nest in the bayfront and interior marshes. The marshes and nearshore waters over the mudflats are heavily used by migratory waterfowl. The endangered California least tern are known to forage in the nearshore waters. A wide variety of other shorebirds and wading birds utilize these habitats.

The endangered salt marsh harvest mouse inhabits the marshes.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Ohlone cultural sites may be nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880), for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
E	EBRP Dispatch EBRP	East Bay Regional Park District	(510) 881-1833
E/T	Anne Rockwell Shoreline Parks Manager	East Bay Regional Park District	(510) 544-3172

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-315 -A Site Strategy - San Lorenzo Creek, Bunker and North Marshes

County and Thomas Guide Location  
AAA Fremont - N Alameda

NOAA CHART  
San Francisco Bay, Southern Part

## 2-315 -A

Latitude N Longitude W  
37 29.0 122 02.0

Last Page Update : 10/1/2002

### CONCERNS and ADVICE to RESPONDERS:

Prevent oil from entering bay front and diked marshes, and marsh-lined channels (San Lorenzo Creek). Avoid trampling marsh vegetation and trampling oil into mud.

### HAZARDS and RESTRICTIONS:

Shallow water, Seas to 3 feet. Soft mud. Possible strong currents in channels.

### SITE STRATEGIES

Strategy 2-315.1 Objective: Exclude oil from entering the bay diked marshes and tidal channels. Should oil enter the marsh or channels contain oil to the smallest possible area.

a) Deploy 600 ft of 9X9+ Hboom across the outer mouth of San Lorenzo Creek, near the edge of the marsh. Deploy 600ft of swamp boom at small angle from levee to levee, across that channel and vegetated flood plain banks. This is a wide creek (150ft) with potentially strong currents. Boom angle should be small. Deflect oil to southern shore/levee where road and small staging area are available for oil recovery. Skiffs can be deployed from levee. The boom can be delivered to site by truck. A shoreside skimming system and storage will be needed to recover oil if sufficient volume accumulates.

B) Deploy 50 ft of swamp boom (4x4+) across unnamed slough channel extending north off San Lorenzo Creek near the mouth. Deploy boom in slough near the confluence with San Lorenzo Creek. Back swamp boom with sorbent boom. Boom angle should be small as currents may be strong. Requires 1 skiff and 4 people and sufficient anchoring to seal banks of slough during the rise and fall of the tide. This slough provides water to Bunker Marsh and others north of San Lorenzo Creek.

C) Deploy 50 ft of swamp boom (4x4) at the entrance to Bunker Marsh, and another 50 ft across channel leading to East and Citation Marshes. Back swamp boom with sorbent boom. This is a leveed marsh with an unrestricted opening to the slough channel that flows to San Lorenzo Creek.

D) Close tide gate structure at entrance to North Marsh. Contact City of San Leandro - Public Works (510) 577-6022.

e) Place weir boards in concrete risers on culvert at larger tidal marsh (adjacent to the golf course and north of North Marsh).

F) Ensure flap gates are adequately closed to tidal flooding at Estudillo Canal, small marsh adjacent to golf course, and at Bochman Channel.

G) Deploy 200 ft of swamp boom (4x4) in the mouth of Bochman Channel located at southern edge of site adjacent to Oro Loma Sanitary Waste facility. Back swamp boom with sorbent boom. Requires 1 skiff and 4 people, or may possibly be deployed from land by heaving lines across this narrow channel and pulling boom across at an angle to any current. The boom can be delivered to the site by truck.

Strategy 2-315.2 Objective: Exclude oil from entering the bay front cordgrass marsh. Should oil enter the marsh contain oil to the smallest possible area.

Deploy 3,000 ft of 9X9+ Hboom around the marsh delta formed at the mouth of San Lorenzo Creek. This may require as many as 4 skiffs or shallow draft boom boats and 12 people. Anchor north end to rip rapped levee of Bunker Marsh, extend around outside (bayside) of marsh and San Lorenzo Creek mouth, south to rip rapped levee just south of Bockman Channel. Boom and skiffs may be deployed from south levee of San Lorenzo Creek or from offshore supply vessel at high tide.

Strategy 2-315.3 Objective: Oil Recovery by skimming

A shoreside skimming system and adequate storage will be needed to recover oil if sufficient volume accumulates as a result of strategy .1. Likely locations are San Lorenzo Creek, Bockman Channel, and Estudillo Canal.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-315.1	600	950	0	300	8 20#	0	2	0	15 stakes	8	
2-315.2	3000	0	0		16 20# w/20' 1/2" chain each	0	4		stakes	12	
2-315.3	0	0	0	0	0	0	0	2	SSS/vac truck		

## **LOGISTICS**

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Hwy 880 to San Leandro; exit Washington Ave. west; right on Grant to Sanitary Waste Facility to launch ramp at San Leandro Marina, take Highway 880 to San Leandro, exit at Marina Blvd. Go west on Marina Blvd. to San Leandro Marina. This large contiguous section of bay front marshes, diked marshes and tidal channels/creeks (~150 acres) is located along the east side of San Francisco Bay in San Leandro.

**LAND ACCESS:** Access for trucks on well maintained, graveled levee roads.

**WATER LOGISTICS:** Shallow draft vessels <6'.

Limitations: depth, obstruction

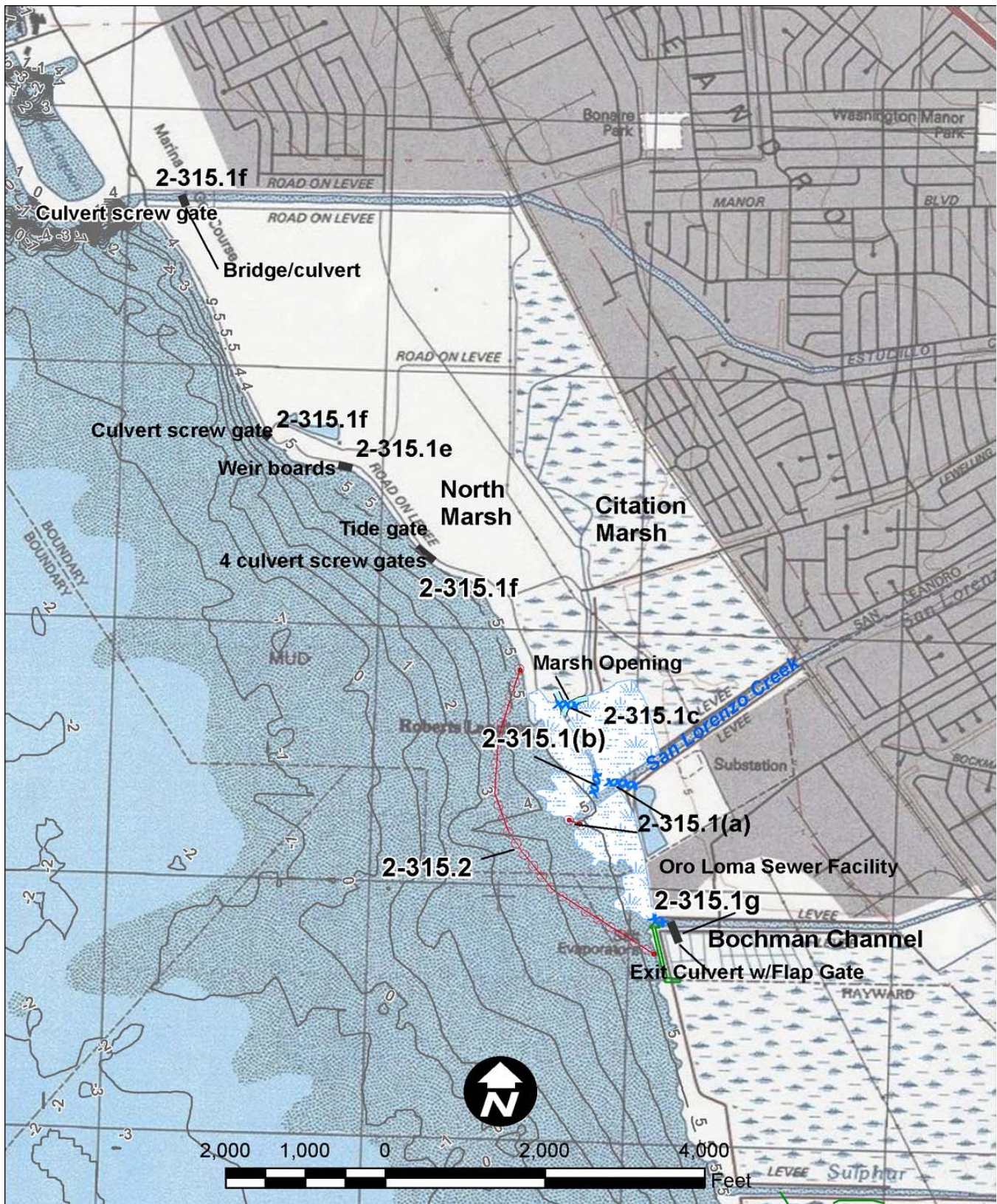
Launching, Loading, Docking and Services Available: Boat launching available at San Leandro Marina. Small skiffs may be launched from levees.

### **FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:**

Staging areas and access are available at the Oro Loma Sanitary Waste Facility. There are 6,000 lb vehicle bridges across both San Lorenzo and Bochman channels. Bochman also has a foot bridge near the mouth. Shoreline south of San Lorenzo Creek is the East Bay Regional Park Districts Hayward Shoreline. Areas north of San Lorenzo Creek, such as Bunker Marsh and North Marsh are owned by the City of San Leandro.

**COMMUNICATIONS PROBLEMS:** No limitations for cell phones or pagers

**ADDITIONAL OPERATIONAL COMMENTS:**



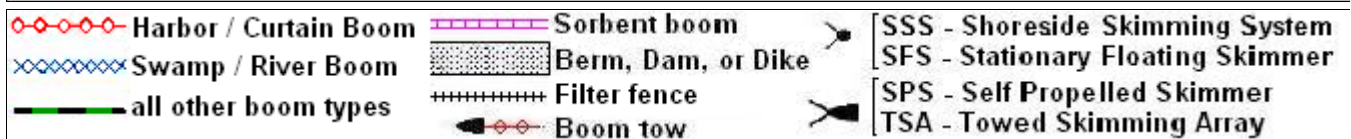
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD

Site: 2-315 Site Name: San Lorenzo Creek & Marsh

Source: basemap provided by ESRI ArcGIS Online Services

Mike Schommer (OSPR) & Greg Ewing (OSPR)

Date: Feb. 8, 2011



County: **Alameda**  
 USGS Quad: **San Leandro**

Thomas Guide Location  
 AAA Fremont - N  
 Latitude N 37 29.0  
 Longitude W 122 02.0  
 NOAA Chart: **San Francisco Bay, Southern Part**

Last Page Update :	10/1/2002
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**SITE DESCRIPTION:**

A large contiguous section of pickleweed marsh located along the east side of south San Francisco Bay and bounded on the north by the Bockman Channel, the east by the city of Hayward, the south by Cogswell Marsh, and on the west by San Francisco Bay. The bay front edge off this site is rip rapped levee, with the exception of a small marsh at Hayward Landing. Mudflats extend 1000's of feet out from the levees into San Francisco Bay. The site consists of three separate salt marshes running approximately 1.7 miles along the east bay shoreline from the mouth of Bockman Channel to the southern tip of Triangle Marsh. The largest of these and the highest priority is the approximately 364 acre Oro Loma Marsh located just south of Bockman Channel and north of Sulphur Creek. Oro Loma is partially protected by levees and fed by two 65 foot channels, one which opens directly to the Bay, and one which opens to Sulphur Creek. Frank's Dump Marsh, as well as a higher elevation landfill/grassland area, is located south of Sulphur Creek and North of West Winton Channel. It is fed by one rubber-valved channel from Sulphur Creek. The third and smallest marsh is Triangle Marsh which extends south from West Winton Channel to Cogswell Marsh and has one inlet near the mouth of West Winton Channel.

**SEASONAL and SPECIAL RESOURCE CONCERN**

The site is an "A" priority all year. The endangered California Clapper Rail and Salt Marsh Harvest Mouse are known to be present and nesting in the Oro Loma Marsh.

**RESOURCES OF PRIMARY CONCERN**

Wetlands and tidal flat habitats are present at this site. Caspian Terns are known to frequent Oro Loma Marsh. The Frank's Dump Marsh West area is open of vegetation, holds ponded water, and is heavily used by migratory waterfowl and shorebirds.

Endangered California clapper rail, salt marsh harvest mouse, California least tern, and threatened snowy plover, as well as pickleweed and cordgrass marsh, and fish are present at the site.

The endangered least tern and large numbers of snowy plover have been reported to frequent Frank's Dump Marsh West. California Clapper Rail and Black Rail have been reported to occur, but not nest, in non-native cordgrass and pickleweed habitat north of Hayward Landing Point, as well as in Triangle Marsh. Salt marsh harvest mouse may also be present in these two areas.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Hayward Landing is a historic site. Ohlone cultural sites may be nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880), for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
E	EBRP Dispatch EBRP	East Bay Regional Park District	(510) 881-1833
E/T	Anne Rockwell Shoreline Parks Manager	East Bay Regional Park District	(510) 544-3172

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-320 -A Site Strategy - Oro Loma Marshes

County and Thomas Guide Location  
AAA Fremont - N Alameda

NOAA CHART  
San Francisco Bay, Southern Part

## 2-320 -A

Latitude N Longitude W  
37 29.0 122 02.0

Last Page Update : 2/25/2011

### CONCERNS and ADVICE to RESPONDERS:

The main concerns are the very sensitive marshes and mudflats here, which are almost impossible to cleanup. The intention is to prevent oil from entering the marshes. Avoid disturbing or trampling marsh vegetation and don't trample oil into the mud.

### HAZARDS and RESTRICTIONS:

Shallow water, seas to 3 feet. Soft mud. Small pilings offshore, northwest of Sulphur Creek. Rocks and pilings of old Hayward Landing running parallel to shore northward from West Winton Channel (about 1/4 mile long).

### SITE STRATEGIES

Boom can be delivered by truck.

Strategy 2-320.1 Objective: Exclude oil from entering the Oro Loma Marsh and Frank's Dump Marsh. Should oil enter the marsh, contain oil to the smallest possible area.

a) Deploy 800 ft of 9x9+Hboom in chevron outside of main uncontrolled breach into Oro Loma from bay. High currents (up to 5 kt) at breach, require boom anchored well outside of breach to prevent entrainment. Can be accomplished with 2 skiffs and 6 people. Shallow draft boom boat would also be useful. Use 100 ft of sorbent boom, 50 ft of Oil Snare (OS) to collect any oil that may accumulate. If oil accumulates in skimmable quantities contact IC/UC.

B) Deploy 500 ft of 9x9+Hboom in mouth of Sulphur Creek at steep angle under bridge, deflecting to southern shoreline just west of rubber intake to Frank's Dump Marsh West. Plug or cover 12" rubber intake valve. Can be accomplished with 1 skiff and 4 people. Use 100 ft of sorbent boom, 50 ft of Oil Snare (OS) to collect any oil that may accumulate. If oil accumulates in skimmable quantities contact IC/UC.

c) Close two screw-down tide gates at inlet to Triangle Marsh. Contact EBRPD to do this.

d) Exclude oil from West Winton Channel and inlet to Triangle Marsh with 500 ft of 9x9+ Hboom angled from southern tip of Hayward Landing point to point of land south of inlet of Triangle Marsh. Tasks can be accomplished with 1 skiff and 4 people.

Strategy 2-320.2 Objective: Exclude oil from entering Frank's Dump Marsh, East/West. Should oil enter the marsh, contain oil to the smallest possible area.

a) Should only be deployed after Strategy 2-320.1b which also protects this opening. Deploy 200 ft of 9X9+ Hboom in chevron across northern opening to Oro Loma located ~2000 ft to the east inside Sulphur Creek. Can be accomplished with 1 skiff and 4 people.

b) Close the six 36" open pipes under West Winton Channel bridge.

Strategy 2-320.3 Objective: Exclude oil from entering Triangle Marsh and West Winton Channel. Protect bayfront pickleweed marsh. Should oil enter the marsh, contain oil to the smallest possible area.

Deploy 1,200 ft of 9X9+ Hboom from southern tip of Hayward Landing point, extending north around point to shoreline to the north to protect the pickleweed marsh north of the point.

Strategy 2-320.4 Objective: Oil Recovery by skimming

Deploy skimmers, and vac trucks if needed, if oil accumulates in skimmable quantities. Consult IC/UC prior to initiation of this strategy

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No	Special Equipment or comment and kinds	staff deploy	Staff tend
2-320.1	1800	0	100 OS	200	13 22#+ w/20' 1/2" chain each		4	1	1000' 1/2" anchor line	14	5
2-320.2	200	0	0	0	2 20# w/20' 1/2" chain each	0	1	1	1000' 1/2" anchor line,	4	5
2-320.3	1200	0	0	0	6 20# w/20' 1/2" chain each	0	2	0	Very shallow water with obstructions	6	2
2-320.4	0	0	0	0	0	0	0	2 SSS	0		

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Hwy 880 to Hayward. Take Winton Ave. exit. Go west on W. Winton Ave to Hayward Regional Shoreline. Launch ramp at San Leandro Marina. Take Highway 880 to San Leandro. Take Marina Blvd. exit. Go west on Marina Blvd. to San Leandro Marina. A large contiguous section of pickleweed marsh located along the east side of south San Francisco Bay and bounded on the north by the Bockman Channel, the east by the city of Hayward, the south by Cogswell Marsh, and on the west by San Francisco Bay.

**LAND ACCESS:** Access for trucks on well maintained, graveled levee roads.

**WATER LOGISTICS:**

Limitations: depth, obstruction

Shallow draft vessels <6'. Rocks, pilings offshore at Hayward Landing

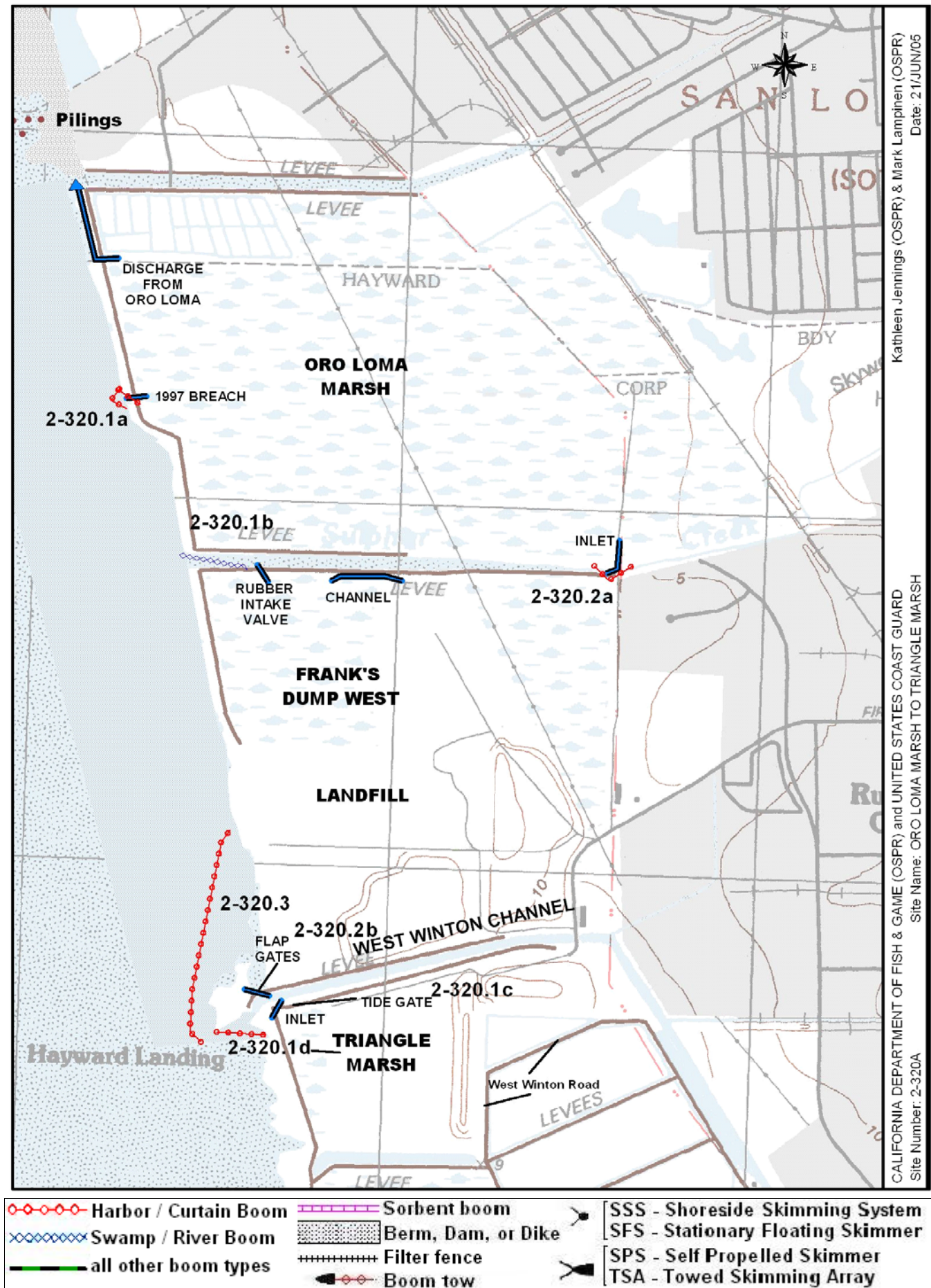
Launching, Loading, Docking  
and Services Available:

Boat launching available at San Leandro Marina. Small skiffs may be launched from levees or small dirt ramp south of Hayward Landing point.

**FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:**

This is all part of East Bay Regional Park's Hayward Shoreline. A small staging area and access is available at the shoreline office at the west end of W. Winton Ave. Access is also available at the west end of Breakwater Ave. adjacent to Highway 92.

**COMMUNICATIONS PROBLEMS:****ADDITIONAL OPERATIONAL COMMENTS:**



County: **Alameda**  
 USGS Quad: **San Leandro**

Thomas Guide Location  
 AAA Fremont - N  
 Latitude N  
 3 7 .63  
 Longitude W  
 122.15  
 NOAA Chart: **San Francisco Bay, Southern Part**

Last Page Update : 10/1/2002

#### SITE DESCRIPTION:

The site consists of three contiguous salt marshes. Cogswell, Hayward and HARD Marshes, which are contained within levees, two emergent marshes at Johnson's Landing, and the Oliver Bros. salt ponds. Length of the site is approximately 3 miles total, along the east side of San Francisco Bay, south of Hayward Landings' Triangle Marsh to the Highway 92 bridge and bounded on the east by the Southern Pacific Railroad. Ownership of Cogswell, Hayward and the Johnson Landing marshes is public through East Bay Regional Parks District. HARD marsh is owned by Hayward Area Recreation District and the Oliver Bros. salt ponds are private but managed by the USFWS. Cogswell Marsh (250 acres) is located immediately south of Hayward Landings' Triangle Marsh. The Cogswell Marsh levee has 2 openings of 800 ft and 300 ft. To the Bay and is a fully tidal salt marsh. Hayward Marsh (145 acres) is a managed brackish marsh. Cogswell and Hayward Marshes are separated by a leveed discharge channel. There are two 36" flap gates for discharge that drain into this channel. An intake channel on the southside of Johnson's Landing feeds into Hayward Marsh. This channel has a single 48" diameter screw gate at the mouth. Adjacent to the intake channel for Hayward Marsh is the mouth of the HARD Marsh channel. This channel passes under a vehicle bridge and runs along the Breakwater Ave. access road and opens into the HARD marsh (80 acres) which is a fully tidal saltmarsh. The Oliver Bros. salt ponds (+100 acres) intake water from this channel via tide gate controls. Johnson Landing has two exposed bayfront pickleweed marshes of approximately 2 acres total in size.

#### SEASONAL and SPECIAL RESOURCE CONCERN

The site is an "A" priority all year.

#### RESOURCES OF PRIMARY CONCERN

Extensive wetland habitats. The endangered salt marsh harvest mouse inhabits the marshes. The marshes are nesting habit for endangered California clapper rail, herons, egrets and resident shorebirds. Endangered California least terns are known to occur seasonally (summer) in the area. The interior marshes are heavily used by migratory waterfowl, shore and wading birds. The salt ponds adjacent to Hwy 92 have snowy plover nesting.

#### CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Ohlone cultural sites may be nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880), for specific information on historic or cultural resources in this area.

#### KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
T		NOAA, National Marine Fisheries Service	(562) 980-3232
O	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
E	EBRP Dispatch EBRP	East Bay Regional Park District	(510) 881-1833
T	John Krause	CA Dept. of Fish & Game, Region 3	(415) 454-8050
E	Butch Paredes	Cargill Salt	(510) 790-8165
E/T	Anne Rockwell Shoreline Parks Manager	East Bay Regional Park District	(510) 544-3172
B	Mark Taylor	East Bay Regional Park District	(510) 783-1066

#### ADDITIONAL SITE SUMMARY COMMENTS:

## 2-324 -A Site Strategy - Cogswell, Hayward, and HARD Marshes

County and Thomas Guide Location  
AAA Fremont - N Alameda

NOAA CHART  
San Francisco Bay, Southern Part

## 2-324 -A

Latitude N Longitude W  
3 7 .63 122.15

Last Page Update : 10/1/2002

### CONCERNS and ADVICE to RESPONDERS:

Primary concern is to prevent oil from entering the interior marshes via levee breaches and tidal channels. Secondly, prevent oiling of marsh margins. Avoid trampling the marsh vegetation and be aware that small endangered mammals and birds are present. Avoid trampling oil into marsh. Should oil enter the marsh, expect injury and death of marsh vegetation, small mammals, shorebirds and waterfowl.

### HAZARDS and RESTRICTIONS:

Very shallow water, offshore access may be limited to high tide periods, seas to 3 feet. Soft mud.

### SITE STRATEGIES

Strategy 2-324.1 Objective: Exclude oil from entering Cogswell, Hayward and HARD marshes. Should oil enter the marshes, contain oil to the smallest possible area.

- a) Cogswell Marsh (north levee breach): Deploy 1400 ft of 9X9+ Hboom in an apex across the levee breach (800 ft.). Road access from W. Winton Ave. Small skiffs can be deployed from levees.
- b) Cogswell Marsh (south levee breach): Deploy 600ft of harbor boom in apex across the levee breach (300 ft.). Foot bridge spans this breach. Road access from Hwy 92 side. Small skiffs can be deployed from levees.
- c) Hayward Marsh: Ensure that intake tide gate (single 48" diameter screw gate) at mouth of intake channel is closed. Ensure that discharge culverts (two 36" discharge flap gates) located in discharge channel are closed to Bay inflow. Contact East Bay Regional Park District Dispatch (510) 881-1833.
- d) HARD Marsh: Deploy 600ft of harbor boom from easterly most points of land at an angle to close channel. Vehicle bridge spans channel near mouth. Strong current at bridge. Road access from Hwy 92 side. Contact East Bay Regional Park District Dispatch (510) 881-1833.

Strategy 2-324.2 Objective: Exclude oil from entering interior of Cogswell Marshes. Should oil enter the marshes, contain oil to the smallest possible area.

- a. Deploy 800 ft of 9X9+ Hboom from north breach to south end of the foot bridge to the east. This closes off northern interior marsh opening. Land access from W. Winton Ave.
- b. Deploy 600ft of 9X9+ Hboom on the inside of the south breach (300 ft.) to act as a collection pocket. Land access from Hwy 92 side.

Strategy 2-324.3 Objective: Exclude oil from Johnson's Landing marshes

Deploy 1000 ft of swamp boom to protect two bayfront pickleweed marshes. Use 600ft around Johnson Landing point. Use 400 ft in front of second exposed marsh (200ft south of Johnson's Landing) and connect with HARD Marsh harbor boom. Road access from Hwy 92 side.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-324.1	2600	1000	0	0	0 9/22+ & 14/12+ danforth	2	4	0	0 bboat: shallow, strandable, stakes	14	2
2-324.2	1400	0	0	0	0 6/22+ danforths & 8/12+ danforth	1	2	0	0 bboat: shallow, strandable. Stakes	6	
2-324.3	0	1000	0	0	0 4/22+danforths & 6/12+ danforth	0	2	0	0 bboat: shallow, strandable. Stakes	6	

### LOGISTICS

#### DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 880 to Hayward. Cogswell Marsh: Take Winton ave. exit. Go west on W. Winton ave. to Hayward Regional Shoreline. HARD and Hayward Marshes: Take Hwy 92 exit. Take Breakwater Ave. exit (Hayward shoreline Interpretive Center). Access by levee road to marshes (roads may be marginal in wet conditions). Launch ramp at San Leandro Marina. Take Highway 880 to San Leandro. Take Marina Blvd. exit. Go west on Marina Blvd. to San Leandro marina. The site consists of three contiguous salt marshes. Cogswell, Hayward and HARD Marshes, which are contained within levees, two emergent marshes at Johnson's Landing, and the Oliver Bros. salt ponds. Length of the site is approximately 3 miles total, along the east side of San Francisco Bay, south of Hayward Landings' Triangle Marsh to the Highway 92 bridge and bounded on the east by the Southern Pacific Railroad. Ownership of Cogswell, Hayward and the Johnson Landing marshes is public through East Bay Regional Parks District. HARD marsh is owned by Hayward Area Recreation District and the Oliver Bros. salt ponds are private but managed by the USFWS.

**LAND ACCESS:** Access for trucks on well maintained, graveled levee roads.

**WATER LOGISTICS:** Shallow Draft Vessels <6'.

Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Boat launching available at San Leandro Marina. Small skiffs may be launched from levees.

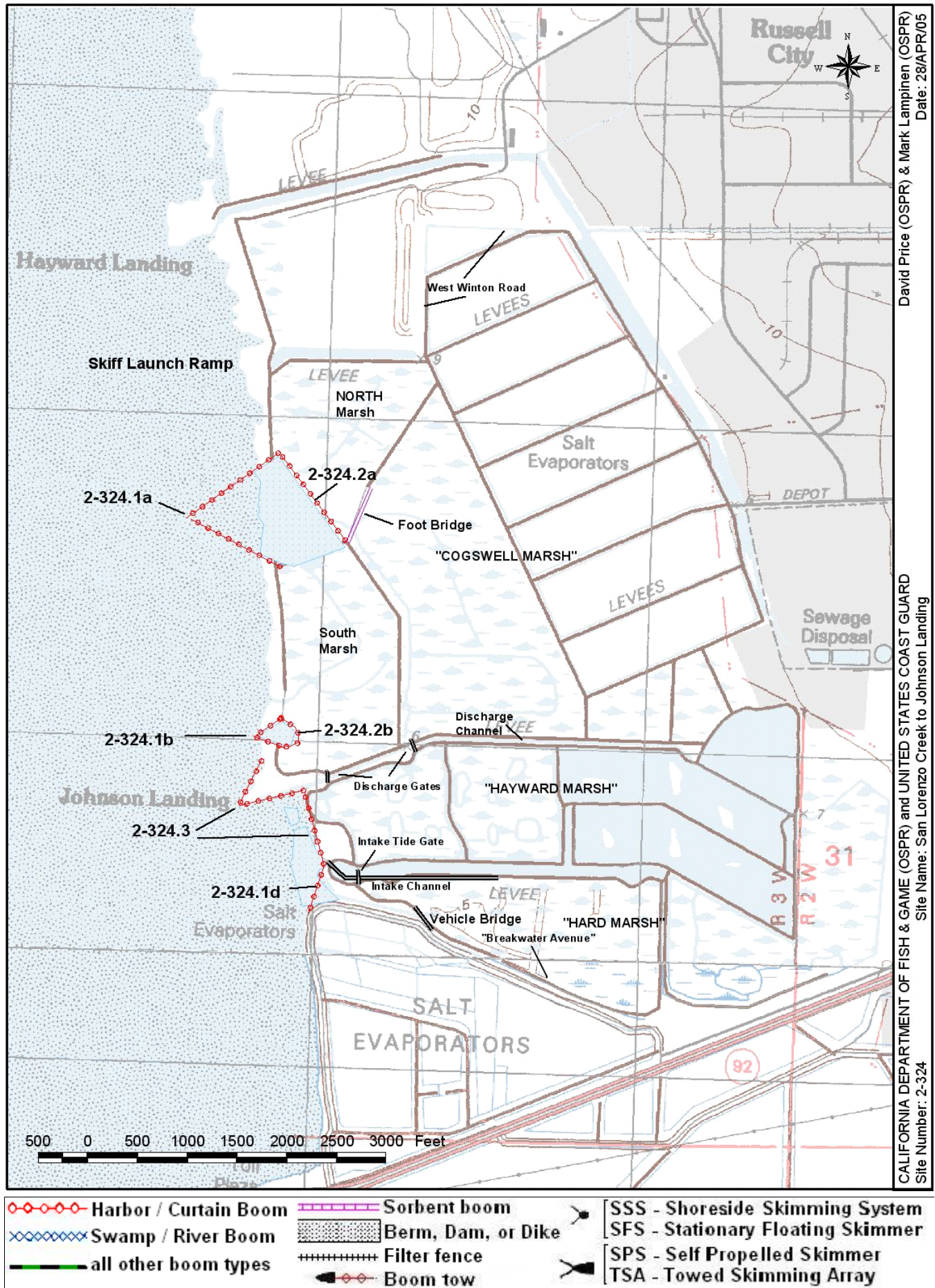
#### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

This is all part of East Bay Regional Park's Hayward Shoreline. A small staging area and access is available at the

shoreline office at the west end of W. Winton Ave. Access is also available at the west end of Breakwater Ave. adjacent to Highway 92.

**COMMUNICATIONS PROBLEMS:**

**ADDITIONAL OPERATIONAL COMMENTS:**



County: **Alameda**  
 USGS Quad: **Redwood Point, Newark**

Thomas Guide Location

Latitude N  
37 35.3

Longitude W  
122 09.0

NOAA Chart: **San Francisco Bay, Southern Part**

Last Page Update : 12/8/2004

**SITE DESCRIPTION:**

Eden Landing Ecological Reserve is a 6,200 acre marsh on the east side of south San Francisco Bay extending four miles south from the San Mateo Bridge to the levee on Coyote Hills Slough, and inland about three miles. This California Dept of Fish and Game Reserve is roughly bounded on the north by Highway 92, the east by the Southern Pacific Railroad, on the west by San Francisco Bay, and on the south by Coyote Hills Slough (Alameda Flood Control Channel). It is fronted by very shallow mudflats extending offshore for a mile. There are four major channels allowing tidal exchange with the extensive marshes, most of which are behind levees and dikes; but there are two large areas (totaling about 320 acres) of undiked marsh fronting on the bay which have direct bay contact. The exposed marsh frontage is in two locations: there is a 18 acre pocket marsh just south of the San Mateo Bridge (about 1/3 mile of bay frontage), and a large marsh (Whale's Tail Marsh - 300 acres) extending about a mile north and a mile south from the mouth of the Old Alameda Creek channel which is about a half mile wide. Both bay front marshes are fairly elevated pickleweed marsh with cordgrass margins. The remainder of the 4 miles of bay frontage, about 1.5 miles, is riprap and exposed, eroding dikes with low sensitivity.

Marshes behind bay front levees include about 40 diked ponds and channels that vary from well vegetated to newly converted salt ponds of largely open water. As of November 2004, the entire marsh circulation system is undergoing improvement including repositioning and replacement of existing channels and interior tide gates and siphons. Of the four openings to inner ponds from the bay, two have (or will have) tide gate controls. The major exposure from the bay is via Old Alameda Creek channel which, in addition to extensive marshes along its margin, has several openings (North Creek and uncontrolled tide gates) to inner ponds. There is also significant site exposure from the upstream Old Alameda Creek urban drainage (most of Alameda Creek Drainage has been diverted to Alameda Flood Control Channel): at the east edge of the marsh, Old Alameda Creek has a road crossing with twenty 48" flap tide gates (open to ebb flow) where stream flows enter tidal channels.

**SEASONAL and SPECIAL RESOURCE CONCERN**

The marsh is an "A" priority all year. Large numbers of birds winter in the interior ponds.

**RESOURCES OF PRIMARY CONCERN**

There is over two miles of exposed high pickleweed marsh with fringing cordgrass plus similar exposed frontage in Alameda Creek Channel totaling about 400 acres. The remainder of the 6200 acres is restored salt ponds varying from developed marsh to open ponded water.

The endangered California clapper rail and California black rail are found along the marsh front, particularly in south Whale's Tail Marsh and along Old Alameda Creek. Endangered least terns forage in the interior ponds (ponds 10 and 11) near the bridge toll plaza. The ponded areas are used year round by thousands of waterbirds and shorebirds. There is a heron rookery in pond 6B.

Endangered salt marsh harvest mouse live in these marshes and historically the saltmarsh wandering shrew was found here. Harbor seals haulout at the south tip of Old Alameda Creek. Bay fish species tend to move in and out of these ponds and channels. There is an eelgrass bed near the mouth of Old Alameda Creek.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Ohlone cultural sites are nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
B/T		NOAA, National Marine Fisheries Service	(562) 980-3232
B	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
B	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
E	EBRP Dispatch EBRP	East Bay Regional Park District	(510) 881-1833
TBE	John Krause	CA Dept. of Fish & Game, Region 3	(415) 454-8050
E	Butch Paredes	Cargill Salt	(510) 790-8165
B	Mark Taylor	East Bay Regional Park District	(510) 783-1066

**ADDITIONAL SITE SUMMARY COMMENTS:**

**CONCERNS and ADVICE to RESPONDERS:**

Last Page Update : 12/15/2010

Threatened and endangered species are in both bay front and back marshes as are thousands of birds and fish: should oil enter the marsh, expect severe injury and death of marsh vegetation, small mammals, shorebirds and waterfowl. Primary concern is to prevent oil entry to extensive marshes (6,000 acres) by blocking water entries. Secondary concern is oiling of two large bay front marshes. Avoid trampling vegetation and avoid trampling oil into sediments.

**HAZARDS and RESTRICTIONS:**

Extremely extensive and shallow mudflats in SF Bay in front of this site. Seas to 3 feet under windy conditions. High voltage electictowers and lines at east end of site pose hazards to helicopter and other low flying traffic.

**SITE STRATEGIES**

Shallow water craft or high tide conditions are necessary for some operations. During wet season, roads are often impassible to vehicles. Currents in channels tend to be strong, requiring diagonal booming, heavy anchors and chain, and longer anchoring scope in currents.

Strategy 2-325.1 Objective: Primary: Exclude oil from entry channels by booming and closing tide gates at bay front.

- Mt. Eden Creek opening needs 200 ft of 9x9+ Hboom in a chevron to exclude oil from entering the Creek.
- Exclude oil from entering Old Alameda Creek mouth with a chevron deployment at the mouth (1500 ft of 9X9+ Hboom), with shoreline attachments just past the mouth to the south and well north (200 ft) of mouth. Back with sorbent boom (1000 ft)
- Exclude oil from entering channel at south end of 'Whale's Tail Marsh with chevron (600 ft of 9x9+ Hboom), with attachments north and south of the mouth. Back with sorbent boom (600 ft).
- About a mile south of Old Alameda Creek mouth is a screw tide gate for two 48" culverts. These must be closed to exclude oil and boomed with 100ft of 9X9+ Hboom.
- Call DFG (John Krause), for information and assistance - 415-454-8050. OSPR Environmental Scientists also have information, gate keys, and keys to locks on tide gates.

Strategy 2-325.2 Objective: Protective booming of Whale's Tail Marsh and pocket marsh south of HWY 92.

Prevent oiling of exposed marsh and exclude oil penetration via finger channels:

- Deploy 2000 ft of 9X9+ Hboom and sorbent from riprap near toll plaza to riprap levee shore 1/3 mile south of Hwy. There is a lot of debris at this location which indicates that oil would tend to collect here.
- Deploy 9300 ft of 9X9+ Hboom and sorbent from riprap at north edge of Whale's Tail Marsh to riprap at south end of Whale's Tail Marsh; link it to exclusions at mouth of Old Alameda Creek and unnamed channel at south end of marsh which should be already be deployed (2-306.1). [upper leg is about 4700 ft; lower leg to south is about 4600 and should be linked to lower exclusion which should already be in place (2-306.1c: 600 ft).] The area at the south end of Whale's Tail marsh below the unnamed channel has a lot of debris and may be a locale where oil will naturally collect.

NOTE: Call John Krause, DFG, for information and assistance for keys, directions, and road conditions - 415-454-8050.

Strategy 2-325.3 Objective: Collection - develop or enhance skimming at mouth of old Alameda Creek when substantial oil is present.

Create a skimming pocket by deploying an additional 300 ft of 9X9+ Hboom just inside the mouth of Old Alameda Creek. Back the pocket with second layer of boom (50 ft swamp boom) and sorbent. Deploy a shoreside skimming system (SSS) on the north levee (may be limited by wet weather). On-site storage will be necessary.

Strategy 2-325.4 Objective: For inland spills from upstream Old Alameda Creek, collect oil at east creek crossing.

Divert oil to bank using diagonal deployment of two 250ft layers of swamp boom and establish shoreside skimming. If oil is light, consult IC for alternatives to SSS. If current is strong, contact IC about underflow dam construction. NOTE: it may be possible to manipulate current pattern to benefit skimming by blocking selected culverts.

**Table of Response Resources**

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-325.1	2400			1600	17 7-22#+& 10-15#+/20'1/2"chain each	2	1			7	
2-325.2	11300	0	0	10000	25 22#+ danforth	4	3	0	0	23	
2-325.3	300	50	0	50	5 15#+ danforths	0	1	1 SSS	1 storage tank	3	2
2-325.4	0	500	0	0	10 4 12#+ anchors + 6 stakes	0	0	1 SSS	0		

## LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

There is access to site at three points. 1) East side access: exit I-880 at Alvarado, north (right) and continue north about 2 miles crossing Union City Blvd onto Horner St and continuing to Veasy St then right to the locked gate. 2) South side access to site and bay front: exit I-880 as above and turn left on Lowry Rd after crossing the flood control channel and continue to Newark Blvd (Union City Blvd): on the opposite side of the Blvd is an East Bay Regional Parks (EBRP) access parking area: the flood control levee is accessible through a locked gate (call EBRP). 3) North side access: exit Hwy 92 freeway at Eden Landing Rd and proceed south to a locked gate (call DFG for access). (Driving within the site is limited seasonally.) Eden Landing Ecological Reserve is a 6,200 acre marsh on the east side of south San Francisco Bay extending four miles south from the San Mateo Bridge to the levee on Coyote Hills Slough, and inland about three miles. This California Dept of Fish and Game Reserve is roughly bounded on the north by Highway 92, the east by the Southern Pacific Railroad, on the west by San Francisco Bay, and on the south by Coyote Hills Slough (Alameda Flood Control Channel). It is fronted by very shallow mudflats extending offshore for a mile.

**LAND ACCESS:** during wet season, south channel only; otherwise roads all traffic.

**WATER LOGISTICS:** Shallow draft vessels <4'.

Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Boat launching available at Redwood City Harbor or San Leandro Marina. Possible CalTRANS launch ramp at toll plaza. Small skiffs may be launched from local levees or Hayward Regional Shoreline.

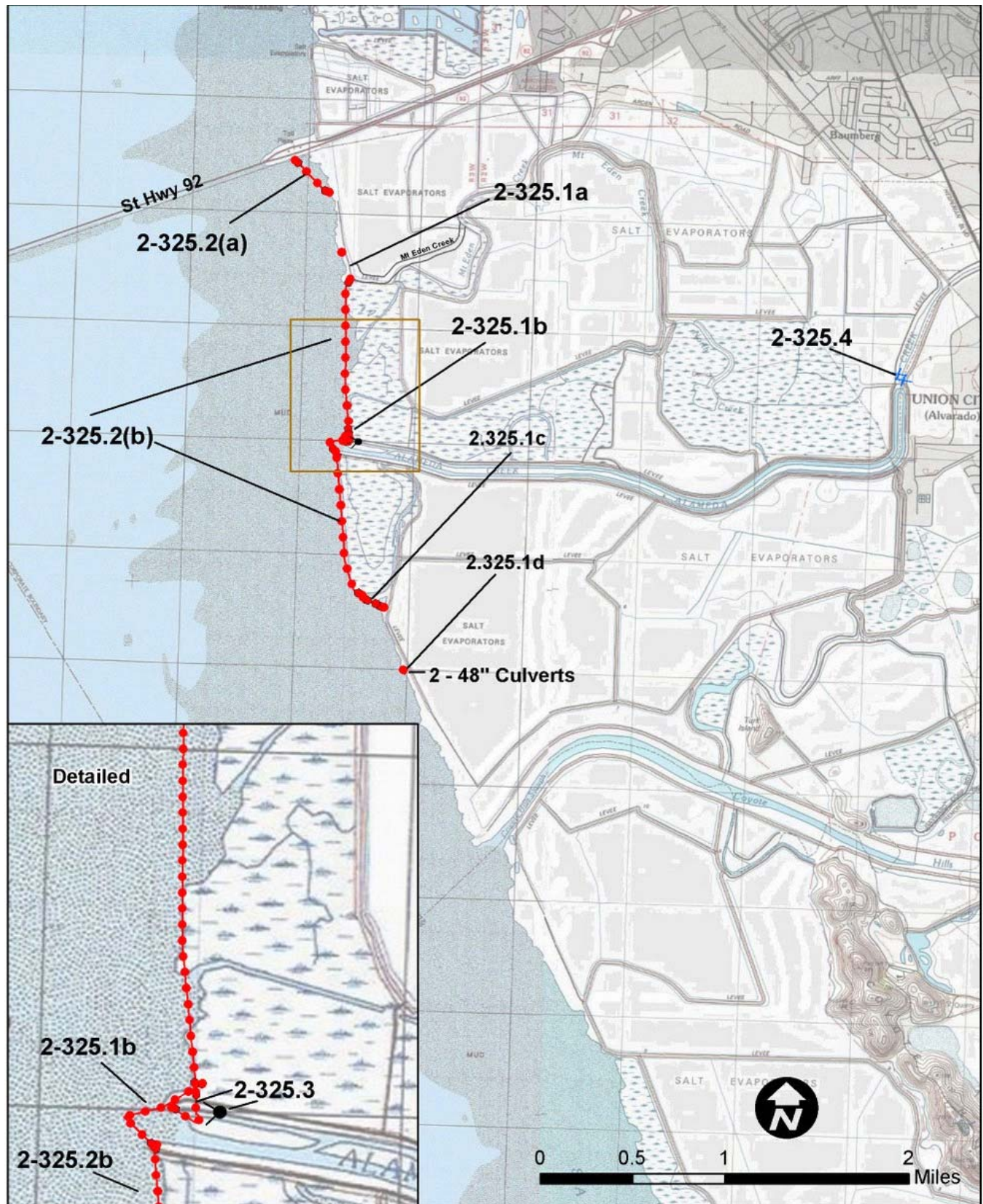
### **FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:**

Staging at end of Veasey Rd, also at EBRPD land off Newark Blvd at the Alameda Flood Control Channel access. Small staging area and field post possible at Hayward Regional Shoreline or National Wildlife Refuge HQ. Command Post available at Alameda County OES.

**COMMUNICATIONS PROBLEMS:** NONE

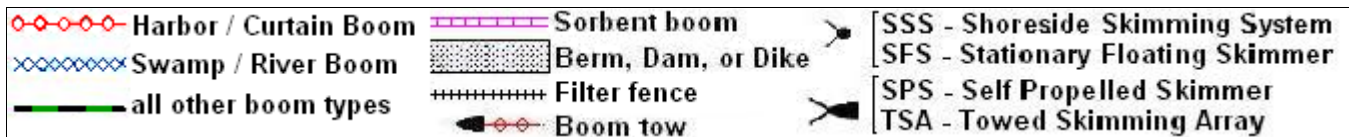
**ADDITIONAL OPERATIONAL COMMENTS:** Vehicle access is controlled by Cargill Salt and Alameda County Flood Control. Truck turn-arounds are available within several hundred yards of the Bay shoreline and will be useful when roads are passable.

There is a possible access to the levee from west bound Hwy 92 at the toll plaza, but that would require improvement with several truckloads of fill to enable exit from the hwy grade to the levee.



CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD  
 Site: 2-325 Site Name: Eden Landing Ecological Reserve  
 Compiled by: OSPR and USCG

Dave Price (OSPR) & Greg Ewing (OSPR)  
 Date: March 22, 2011



## 2-326 -A Site Summary- Coyote Hills Slough -Alameda Flood Control Channel 2-326 -A

County: **Alameda**  
USGS Quad: **Newark, Redwood Point**

Thomas Guide Location  
AAA Hayward - U  
Latitude N 37 29.0  
Longitude W 122 02.0  
NOAA Chart: **San Francisco Bay, Southern Part**

Last Page Update : 10/1/2002

### SITE DESCRIPTION:

This wide flood control channel begins at I-880 and extends about 5 miles to the bay front mouth (about 4 miles south of the San Mateo Bridge and about 2 miles south of Old Alameda Creek mouth). At the mouth, the channel is about one-third mile wide. It is bounded by flood control levees and includes over 440 acres of salt marsh and several adjacent marshes and salt ponds draw water from the channel. This channel is owned and maintained by Alameda County. The narrow portions of the channel are over 500 feet wide, and the waterway itself is only a small portion of the total channel. The north half of the channel had historic levees which separated it from the bay and from the old slough, but these levees are now compromised, and small finger channels provide tidal exchange. Most of the channel is saltmarsh and is tidally influenced. Of the adjacent properties which draw water from the Slough, the land to the north is mostly Eden Landing Ecological Reserve land (CA DFG); property on the south side of the channel is mostly East Bay Regional Parks District land on the east end (Coyote Hills Regional Park); and toward the bay, USFWS land (currently leased to Cargill Salt). Alameda Creek Trails EBRPD maintains trails on both levees. The watershed of this large channel drains several hundred square miles including urban areas; so, urban threats are also a concern here. The levees are year-round roads all the way to the bay front.

### SEASONAL and SPECIAL RESOURCE CONCERN

The marsh is an "A" priority all year.

### RESOURCES OF PRIMARY CONCERN

Within the channel there are about 400 acres of salt marsh habitat and shallows with the typical complement of fauna and flora. Most of the marsh is pickleweed and high marsh, but there is cordgrass marsh at the bay front. In addition, the extensive marshes and salt ponds adjacent which draw water from the channel are at risk.

The endangered California clapper rail and the threatened California black rail live in the marshes. Endangered least tern forage in the channel near the mouth.

The endangered salt marsh harvest mouse inhabits these marshes.

This is a steelhead stream. So, adults pass through on their way upstream and smolts migrate downstream.

### CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Ohlone cultural sites are nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

### KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
B		SF Bird Observatory	(408) 946-6548
B/T		NOAA, National Marine Fisheries Service	(562) 980-3232
B		Baylands Nature Preserve	(650) 617-3156
E	City of Alameda, Parks	Alameda, City of, Dept. of Parks and Recreation	(510) 747-7529
B	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
B	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
E	EBRP Dispatch EBRP	East Bay Regional Park District	(510) 881-1833
E	Butch Paredes	Cargill Salt	(510) 790-8165

### ADDITIONAL SITE SUMMARY COMMENTS:

**2-326 -A Site Strategy - Coyote Hills Slough -Alameda Flood Control Channel 2-326 -A**

County and Thomas Guide Location

NOAA CHART

Latitude N

Longitude W

AAA Hayward - U Alameda

San Francisco Bay, Southern Part

37 29.0

122 02.0

**CONCERNS and ADVICE to RESPONDERS:**

Last Page Update : 10/1/2002

Oil from the bay or inland poses a threat to over 430 acres of marshes which are habitat for many species including rare and endangered birds and small animals. Concern is to stop oil from entering the waterway and marshes from the bay, or for inland oil, minimize impacts and keep oil from leaving the channel. Minimize trampling of vegetation and disturbance of wildlife. Avoid trampling oil into sediment.

**HAZARDS and RESTRICTIONS:**

Shallow water and extensive mudflats at mouth. Seas to 3 feet at bayfront during windy conditions. Aircraft beware of highpower wires crossing the channel about 2 miles east of waterfront.

**SITE STRATEGIES**

Shallow water craft or high tide conditions are necessary for some operations. Currents in channels tend to be strong, requiring diagonal booming, heavy anchors and chain, and longer anchoring scope in currents. Deployment from levee may be most feasible approach since levee roads are good and shallow waters pose limitations.

Strategy 2-326.1 Objective: Primary: Exclusion booming when oil threat is from bay.

- Exclude oil from entering main channel: deploy boom at the mouth in a chevron and deflect as much as possible to natural collection site south of mouth. 1400 ft of 4X4+ boom (9X9+ Hboom may be substituted). Back with a 500 ft diagonal of sorbent boom. This action is best addressed from water or from south levee.
- Exclude oil from entering the marshy area north of the stream mouth by booming from the chevron above, to the north levee. 1300 ft of 4X4+ boom (9X9+ Hboom may be substituted). There is a low partially destroyed dike which extends from the north channel levee to the mouth of main channel; several small finger channels enable flow throughout this large pickleweed marsh section: block each of this with a bat of sorbent boom and stake in place. This action is best addressed from water or from north levee.

Strategy 2-326.2 Objective: Backup primary bay exclusion: secondary layer of exclusion booming for oil threat from bay under windy conditions or major oil threat. This is a repeat of primary strategy minus sorbent boom.

- Back-up exclusion on main channel: deploy boom at the mouth in a chevron and deflect as much as possible to natural collection site south of mouth, behind primary exclusion. 1400 ft of 4X4+ boom (harbor boom may be substituted). This action is best addressed from water or from south levee.
- Back-up exclusion from entering the marshy area north of the stream mouth by booming from the chevron above, to the north levee, behind primary exclusion. 1300 ft of 4X4+ boom (harbor boom may be substituted). This action is best addressed from water or from north levee.

Strategy 2-326.3 Objective: Skimming operations at this site. Natural skim pocket with access just south of mouth.

There is a natural skimming pocket surrounded by low dikes just to south of channel mouth. Strategy 2-326.1 and .2 should direct skimmable oil to this location. Use 600 ft of light boom with sorbent backing to devise a skimming pocket to trap and hold oil in the pocket (also Oil Snare for trapping on ebb). It may be necessary to excavate a depression to enable skimming head. Storage tank or vacuum truck will be necessary for oil collection. Light stations will be needed for night operations including skimming. NOTE: if oil is too light for effective skimming, on-scene staff should contact IC to consider passive collection with Oil Snare.

Strategy 2-326.4 Objective: Inland oil threats: exclusion, deflection, collection.

In the event of inland oil threats, seek collection site offering best advantage in current management and access and create a skim pocket. (Excavation of pocket may be necessary to keep oil from entraining or re-entering current.) Use diagonal booming (light boom) to move oil into collection pocket, and back deflection with sorbent. Line skim pocket with light boom and sorbent. Use Oil Snare to collect oil as needed. Shoreside skimming (SSS) will require on-site storage or vacuum truck. Light stations will be needed for night operations including skimming. Actual amount of boom needed will depend on where oil can be controlled: 700 ft of swamp boom and 100 ft of oil snare should be adequate.

**Table of Response Resources**

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring type and gear	Boom no	Skiffs punts	Skimmers No	Type	Special Equipment or comment	staff deploy	Staff tend
2-326.1		2700		500	17 2 22#+ & 5 12#+ danft & 10 stakes	1	2				10	
2-326.2		2700			7 2 22#+ & 5 12#+ danft & heavy chain	1	2				7	
2-326.3		600	100 OS	400	12 2 12#+ danft & 10 stakes		1	1 SSS	2	storage tank or vac truck, light.	3	2
2-326.4		700	100 OS	700	15 5 12#+ danft & 10 stakes		1	1 SSS	2	storage tank or Vac Truck, lights	3	2

## **LOGISTICS**

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Access to northside levee: exit I-880 at Alvarado, north (right) and after crossing the flood control channel, turn left on Lowry Rd and continue to Newark Blvd (Union City Blvd): on the opposite side of the Blvd is an East Bay Regional Parks (EBRP) access parking area: the flood control levee is accessible through a locked gate (call EBRP or Alameda County Flood Control). Access directly by boat. This wide flood control channel begins at I-880 and extends about 5 miles to the bay front mouth (about 4 miles south of the San Mateo Bridge and about 2 miles south of Old Alameda Creek mouth). At the mouth, the channel is about one-third mile wide. It is bounded by flood control levees and includes over 440 acres of salt marsh and several adjacent marshes and salt ponds draw water from the channel. This channel is owned and maintained by Alameda County.

**LAND ACCESS:** All season gravel roads to bay on Alameda Co Flood Control levees.

**WATER LOGISTICS:** Shallow draft vessels <3'

Limitations: depth, obstruction

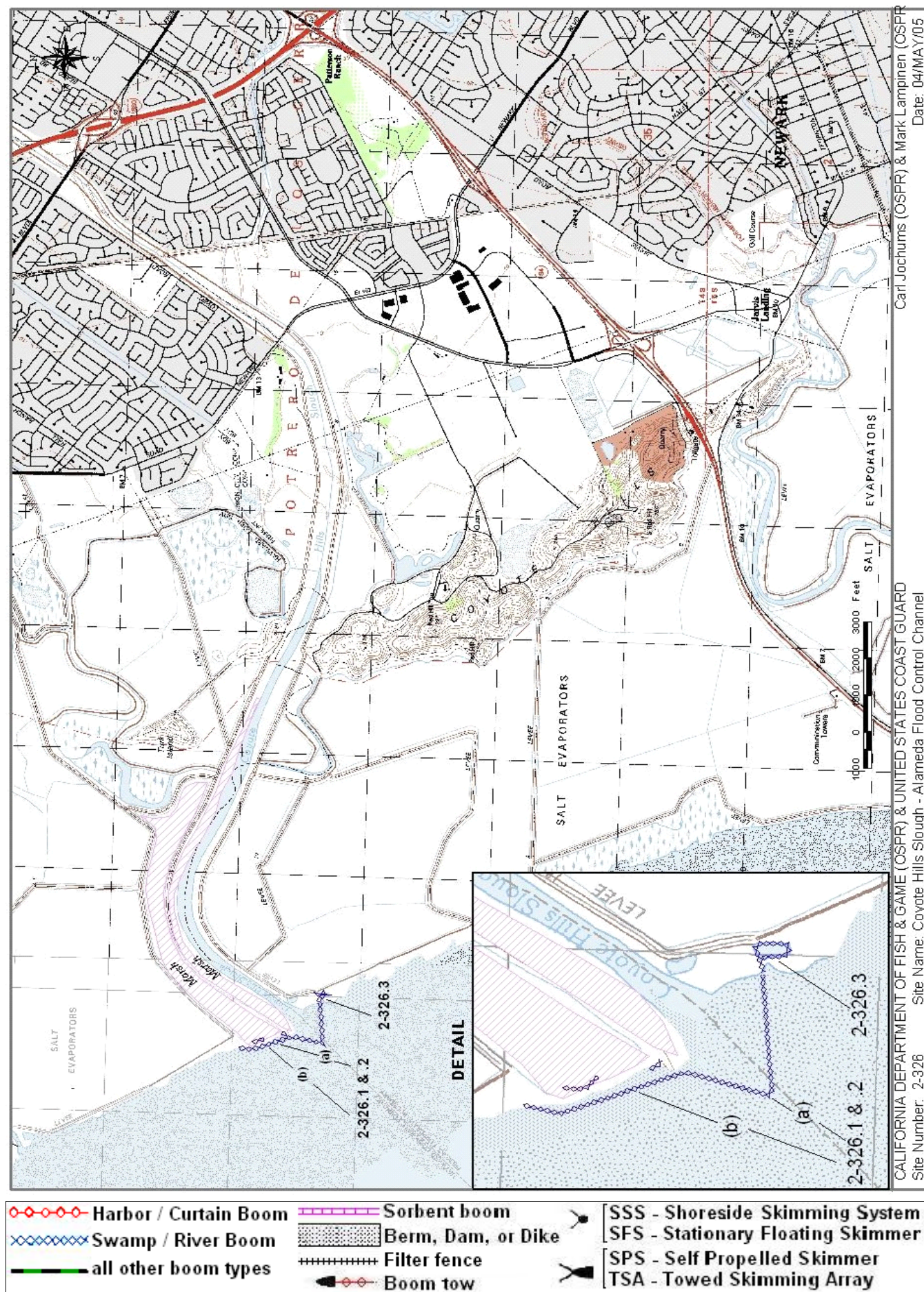
Launching, Loading, Docking and Services Available: Boat launching available at Redwood City Harbor. Small skiffs may be launched from levees: south levee is closer to water.

### **FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:**

Large staging area available at Redwood City Harbor. Four small local staging on north and south levees at East Bay Regional Park - Alameda Creek Trails ( 5 acres, parking, chem toilets: 2250 Issherwood, Fremont.) Additional staging area and field post possible at National Wildlife Refuge HQ or EBRP Coyote Hills Regional Park. Full Command Post available through Alameda County OES.

**COMMUNICATIONS PROBLEMS:** None

**ADDITIONAL OPERATIONAL COMMENTS:** Vehicle access is controlled by Alameda County Flood Control.



County: **Alameda**  
USGS Quad: **Newark**

Thomas Guide Location  
AAA Hayward - U

Latitude N  
37.54  
Longitude W  
122.12

NOAA Chart: **San Francisco Bay, Southern Part**

Last Page Update : 10/1/2002

**SITE DESCRIPTION:**

A large contiguous section of marsh located along the east side of south San Francisco Bay and bounded on the north by Coyote Hills Slough (Alameda County Flood Control Channel), on the east by the Coyote Hills, on the south by Highway 84, and on the west by San Francisco Bay. The marsh is surrounded by Cargill salt ponds on three sides and is part of the Don Edwards San Francisco Bay National Wildlife Refuge. The bay front edge of this site is not leveed and is therefore vulnerable to oiling. Mudflats extend 1000's of feet from the site. The site consists of a contiguous salt marsh, approximately 1/4 mile wide, running approximately 1.2 miles along the east bay shoreline beginning from below the mouth of Coyote Hills Slough and surrounded to the north, east and south by three salt ponds. Ideal Marsh is fed by numerous small channels linked directly to the bay and has several small coves which function as natural collection areas.

**SEASONAL and SPECIAL RESOURCE CONCERN**

The marsh is an "A" priority all year.

**RESOURCES OF PRIMARY CONCERN**

Wetlands and tidal flat habitats are present at this site. Endangered California clapper rail is found year round at this site. The salt ponds surrounding the site are heavily used by migratory waterfowl, and shorebirds.

The endangered California clapper rail and salt marsh harvest mouse live in the marshes. Salt marsh habitat and shallows with complement of fauna and flora.

Nesting California gulls are found on levees in the ponds next to Ideal Marsh and represent a concern for response.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Ohlone cultural sites are nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E	Butch Paredes	Cargill Salt	(510) 790-8165

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-328 -A Site Strategy - Ideal and USFWS N-5 Marshes

County and Thomas Guide Location  
AAA Hayward - U Alameda

NOAA CHART  
San Francisco Bay, Southern Part

## 2-328 -A

Latitude N Longitude W  
37.54 122.12

Last Page Update : 10/1/2002

### CONCERNS and ADVICE to RESPONDERS:

The main concerns are the very sensitive marsh and mudflats here, which are almost impossible to cleanup. The intention is to prevent oil from entering the marsh. Avoid disturbing or trampling marsh vegetation. Should oil enter the marsh, expect injury and death of marsh vegetation, small mammals, shorebirds and waterfowl.

### HAZARDS and RESTRICTIONS:

Shallow water. Seas to 3 feet. Soft mud.

### SITE STRATEGIES

Strategy 2-328.1 Objective: Deflection booming. Deployment of this strategy should be followed by strategy 2 or 3, as time and resources permit.

On an incoming tide or oil coming from the northwest, deploy 2000 ft of 9X9+ Hboom from northern edge of Ideal Marsh angled to the southwest to divert oil from contacting the marsh. On outgoing tide and oil coming from the south bay or bridge, deploy same length of harbor boom from southwest corner of Ideal Marsh to the northwest. High currents (up to 5kts) require shallow angle for deployment. Can be accomplished with 2 skiffs and 6 people. Shallow draft boom boat would also be useful. Boom can be delivered by truck on levee roads to north and south of Ideal Marsh. Use 50 ft of oil snare, 100ft of sorbent boom to collect oil that may accumulate. Contact IC/UC if oil accumulates in skimmable quantities.

Strategy 2-328.2 Objective: Exclude oil from entering Ideal Marsh. Should oil enter the marsh, contain oil to the smallest possible area of the marsh.

- a) Deploy 6500 ft of 9X9+ Hboom along 1.2 miles of Ideal Marsh shoreline. Can be accomplished with 4 skiffs and 12 people. Boom can be delivered by truck on levee roads.
- b) Deploy 1000 ft of swamp boom in 100-200ft increments to block inlets to Ideal Marsh. Can be accomplished with 2 skiff and 6 people. Boom can be delivered by truck on levee roads. Inlets to marsh will need to be identified in the field.

Strategy 2-328.3 Objective: Oil Recovery by Shoreside skimming

Deploy skimmers if oil accumulates in skimmable quantities. Consult with IC/UC prior to the initiation of this strategy.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment and kinds	staff deploy	Staff tend
2-328.1	2000		50 OS	100	6 20# w/20' 1/2" chain each	1	2		stakes		
2-328.2	6500	1000	0	0	22 20# w/20' 1/2" chain each	0	6	0	stakes		
2-328.3	0	0	0	0	0	0	0	0 vos	0		

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Hwy 880 to Newark. Take Highway 84 west to Dumbarton Bridge. Exit at Thorton Ave. and travel south for 0.8 miles to the wildlife refuge entrance on the right on Marshlands Rd. Drive 3 miles to end and then under Dumbarton Bridge to access salt pond levee to Ideal Marsh. An alternate route exists through Coyote Hills Regional Park. Launch ramp at San Leandro Marina. Take highway 880 to San Leandro. Take Marina Blvd. exit. Go west on Marina Blvd. to San Leandro Marina. A large contiguous section of marsh located along the east side of south San Francisco Bay and bounded on the north by Coyote Hills Slough (Alameda County Flood Control Channel), on the east by the Coyote Hills, on the south by Highway 84, and on the west by San Francisco Bay.

**LAND ACCESS:** Gravel roads to the bay border the Coyote Hills Slough channel.

**WATER LOGISTICS:** Shallow Draft Vessels <6'

Limitations: depth, obstruction

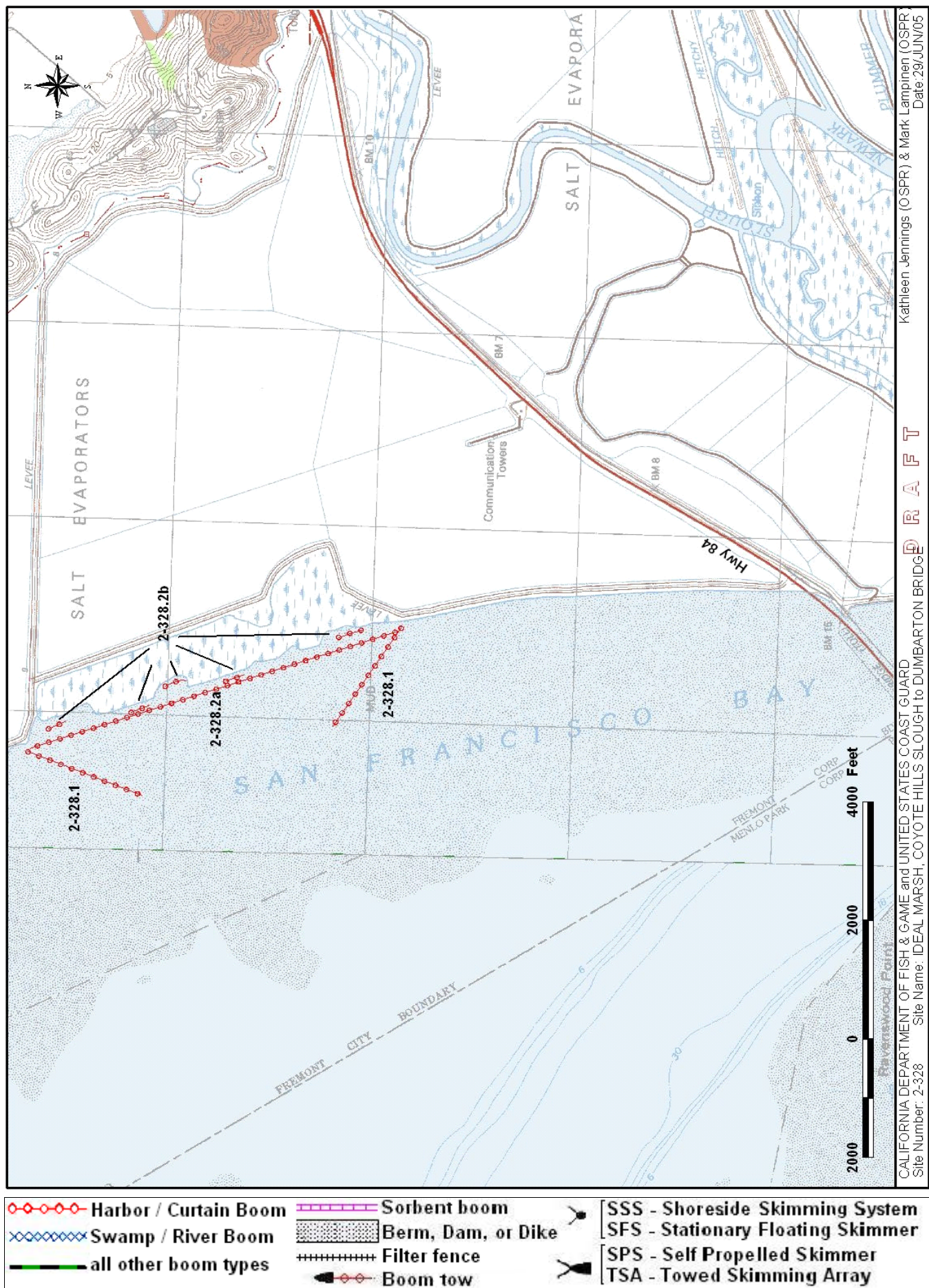
Launching, Loading, Docking and Services Available: Boat launching available at Redwood Creek Boat Ramp and San Leandro Marina. Small skiffs may be launched from levees or small boat ramp at Refuge entrance off Thorton Rd.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

This area is all part of the Don Edwards San Francisco Bay National Wildlife Refuge. A small staging area and access is available at the USFWS Headquarters and Visitor's Center on Marshlands Rd.

### COMMUNICATIONS PROBLEMS:

**ADDITIONAL OPERATIONAL COMMENTS:** Vehicle access is controlled by Alameda County Flood Control. Dry season vehicle access on Cargill salt pond levees.



**2-340 -A Site Summary- Dumbarton Point Marsh/Mudflat****2-340 -A**

County: **Alameda**  
USGS Quad: **Mountain View**

Thomas Guide Location

AAA Fremont - N

Latitude N

37 30.0

Longitude W

122 06.0

NOAA Chart: **18654 San Francisco Bay Southern Part**

Last Page Update : 7/1/1996

**SITE DESCRIPTION:**

A large contiguous section of marsh located along the east side of south San Francisco Bay and bounded on the northwest by the Southern Pacific Railroad levee, the east by Newark Slough, and the south and west by San Francisco Bay. This is a marsh with many primary slough channels entering the marsh from its southern shore. These channels present an opportunity for oil to enter the interior of the marsh. There is a wild mudflat between the main channel of the bay and the marsh. This site is part of the San Francisco Bay National Wildlife Refuge.

**SEASONAL and SPECIAL RESOURCE CONCERN**

"A" priority year-round due to salt marsh, mudflat, and special status species habitat.

**RESOURCES OF PRIMARY CONCERN**

This marsh is one of the most important California clapper rail nesting areas in the south bay and a harbor seal haul out area.

The endangered California clapper rail and California brown pelican, peregrine falcon are found at the site.

California Species of Special Concern: the saltmarsh common yellowthroat is present. Shorebirds, waterfowl, wading birds, water birds, raptors are found at the site.

A California Species of Special Concern, salt marsh wandering shrew is present at the site.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Ohlone cultural sites are nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
O	Scott Miner	US Army Corps of Engineers	(415) 503-6573
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E	Butch Paredes	Cargill Salt	(510) 790-8165

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-340 -A Site Strategy - Dumbarton Point Marsh/Mudflat

County and Thomas Guide Location  
AAA Fremont - N Alameda

NOAA CHART  
18654 San Francisco Bay Southern Part

## 2-340 -A

Latitude N Longitude W  
37 30.0 122 06.0

### CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

The concern is to prevent oil from being carried into the marsh via large and small tidal channels and minimize oiling of marsh fronts. Should oil enter the marsh there will be injury and death of marsh vegetation, small mammals, shorebirds and waterfowl, including endangered and threatened species. There is also the concern that response and cleanup activity will result in trampling of marsh, trampling of oil into sediments, and disturbing wildlife. Please exercise appropriate caution.

### HAZARDS and RESTRICTIONS:

Railroad Bridge, Dumbarton Bridge, powerline and towers, shallow water, soft mud can all be hazards to response activity.

### SITE STRATEGIES

Strategy 2-340.1 Objective: Exclude oil from entering marsh front, mudflat, and small channels to the marsh interior.

"Plug" nine small slough channels with approximately 2000 ft of fence boom or 4x4 swamp boom and sorbent booms. Block culvert near pump house with earth or steel plate.

Strategy 2-340.2 Objective: Deflection Booming

Deploy approximately 3000 ft of 9X9+ Hboom off mudflats in 1000ft sections.

Strategy 2-340.3 Objective: Protection booming of shoreline

Line marsh front with sorbent boom. Use 9X9+ Hboom at shelf break.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-340.1	0	2000				2	3			10	
2-340.2	3000				20 20-25#w/10'chain each	3	1			11	
2-340.3	0			8000		5	3		shovels, 2,000' 3/8" line	18	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Hwy 880 to Hwy 84 West. Thornton Ave. exit south to Marshlands Rd. Take Marshlands Rd. out to bay front near foot of Dumbarton Bridge. Access levee road via contact with San Francisco National Wildlife Refuge HQ. Nearest large boat ramp is at Redwood City, small boat launch near Refuge HQ on Newark Slough. A large contiguous section of marsh located along the east side of south San Francisco Bay and bounded on the northwest by the Southern Pacific Railroad levee, the east by Newark Slough, and the south and west by San Francisco Bay.

**LAND ACCESS:** All access levels ok

**WATER LOGISTICS:** Wide mudflats, shallow water

Limitations: depth, obstruction

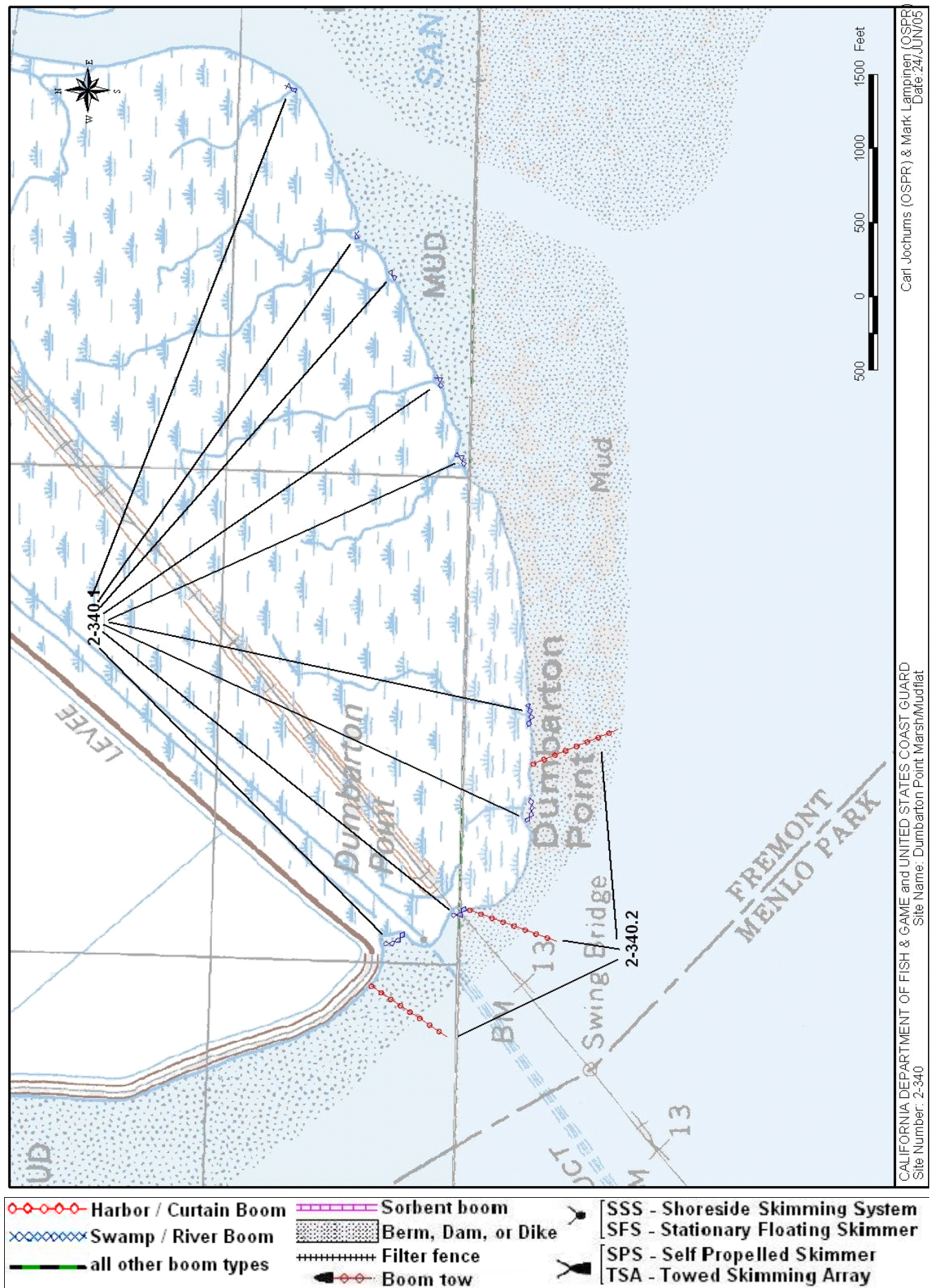
Launching, Loading, Docking and Services Available: Nearest large boat ramp is at Redwood City, small boat launch near San Francisco National Wildlife Refuge HQ on Newark Slough.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Large staging area available at Redwood City Harbor. Small staging area and field post possible at National Wildlife Refuge HQ. Command Post available at Alameda County OES.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



County: **Alameda**  
 USGS Quad: **Mountain View**

Thomas Guide Location

AAA Fremont - N

Latitude N

37 30.0

Longitude W

122 05.0

NOAA Chart: **18654 San Francisco Bay Southern Part**

Last Page Update : 7/1/1996

#### SITE DESCRIPTION:

Newark Slough and Plummer Creek join and form one outlet to South San Francisco Bay two miles SE of Dumbarton Bridge. Extensive salt marsh areas with numerous tidal channels extend over a mile to the north and south of the inlet. The entire area including much of the offshore mudflats is part of the USFWS San Francisco Bay Wildlife Refuge. Mudflats are shallow and extensive and are cut with deep tidal channels. Bay frontage is cordgrass marsh. Newark Slough and Plummer Creek are leveed and bordered by Cargill salt ponds

#### SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority year-round for marshes, harbor seals, and California clapper rail.

#### RESOURCES OF PRIMARY CONCERN

The endangered California clapper rail, California least tern, also known to occur onsite: California brown pelican and American peregrine falcon.

The endangered saltmarsh harvest mouse is present. Harbor seals use the west shore of Newark Slough near the mouth as a haulout and rookery area. There is a moderate risk year round and high risks to pups during lactation due to possible ingestion of petroleum products from female's fur. Spring breeding season runs from approximately 15 March - 10 June. Lactation period is 3 to 5 weeks long. Spring approximately 100 adults and pups; Fall/Winter approximately 5-40 seals

Species of Special Concern: Hairless Allocarya aka Hairless popcornflower plant (*Plagiobothrys glabir*).

#### CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Ohlone cultural sites are nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

#### KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
O		SF Bird Observatory	(408) 946-6548
T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
O	Scott Miner	US Army Corps of Engineers	(415) 503-6573
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E	Butch Paredes	Cargill Salt	(510) 790-8165

#### ADDITIONAL SITE SUMMARY COMMENTS:

## 2-342 -A Site Strategy - Newark/Plummer Creek

County and Thomas Guide Location  
AAA Fremont - N Alameda

NOAA CHART  
18654 San Francisco Bay Southern Part

2-342 -A  
Latitude N Longitude W  
37 30.0 122 05.0

### CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

The primary concern is oil penetrating the marsh by being carried up creeks and small tidal channels. The secondary concern is oiling of harbor seals and impacts to marsh plants and wildlife. First objective is to exclude oil from entering marsh via tidal channels; secondary objective is to deflect oil away from marsh; and the final objective is protective booming of marshfront. There is always the concern that response and cleanup activity will damage marshes: trampling of vegetation, trampling oil into sediments, and disturbing wildlife.

### HAZARDS and RESTRICTIONS:

Shallow water. Levee roads impassable in winter.

### SITE STRATEGIES

Strategy 2-342.1 Objective: Exclusion/Diversion boom to prevent oil from entering channel between bay and site.

- Offshore skimming by on-water task force (see GRP-2-400).
- Deflection booming off mudflat break with 9X9+ Hboom.
- "Plug" small finger sloughs and channels inside Newark Slough with fence boom, sorbent, and swamp boom.
- Deploy curtain boom from west side of mouth back into Plummer Creek's eastern shore. Also deploy harbor boom along east shore of mouth from bayfront back to skimmer pocket.
- Use skimmer in channel or possibly vac truck with skimmer from shore levee in Plummer Creek (dry season only).

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	type and gear	Boom boat	Skiffs punts	Skimmers No	Special and	Equipment or kinds	comment	staff deploy	Staff tend
2-342.1	8000	1000		5000	40	40-25#w/10'chain each	14	4	1				18	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Take Hwy 880 south to the Thornton Avenue exit. Proceed east on Marshland Road. Need San Francisco National Wildlife Refuge assistance for access via Levee Road. Access to Newark Slough possible through the Cargill Plant.

NOTE: Access to levee only during dry months. Access may be limited to small vehicles. Tractor trailer rigs may not be able to access area. Newark Slough and Plummer Creek join and form one outlet to South San Francisco Bay two miles SE of Dumbarton Bridge. Extensive salt marsh areas with numerous tidal channels extend over a mile to the north and south of the inlet.

**LAND ACCESS:** 2WD,4WD,ATV,FT DRY SEASON ONLY, hovercraft in wet season

**WATER LOGISTICS:** SHALLOW DRAFT VESSELS <6'

Limitations: depth, obstruction

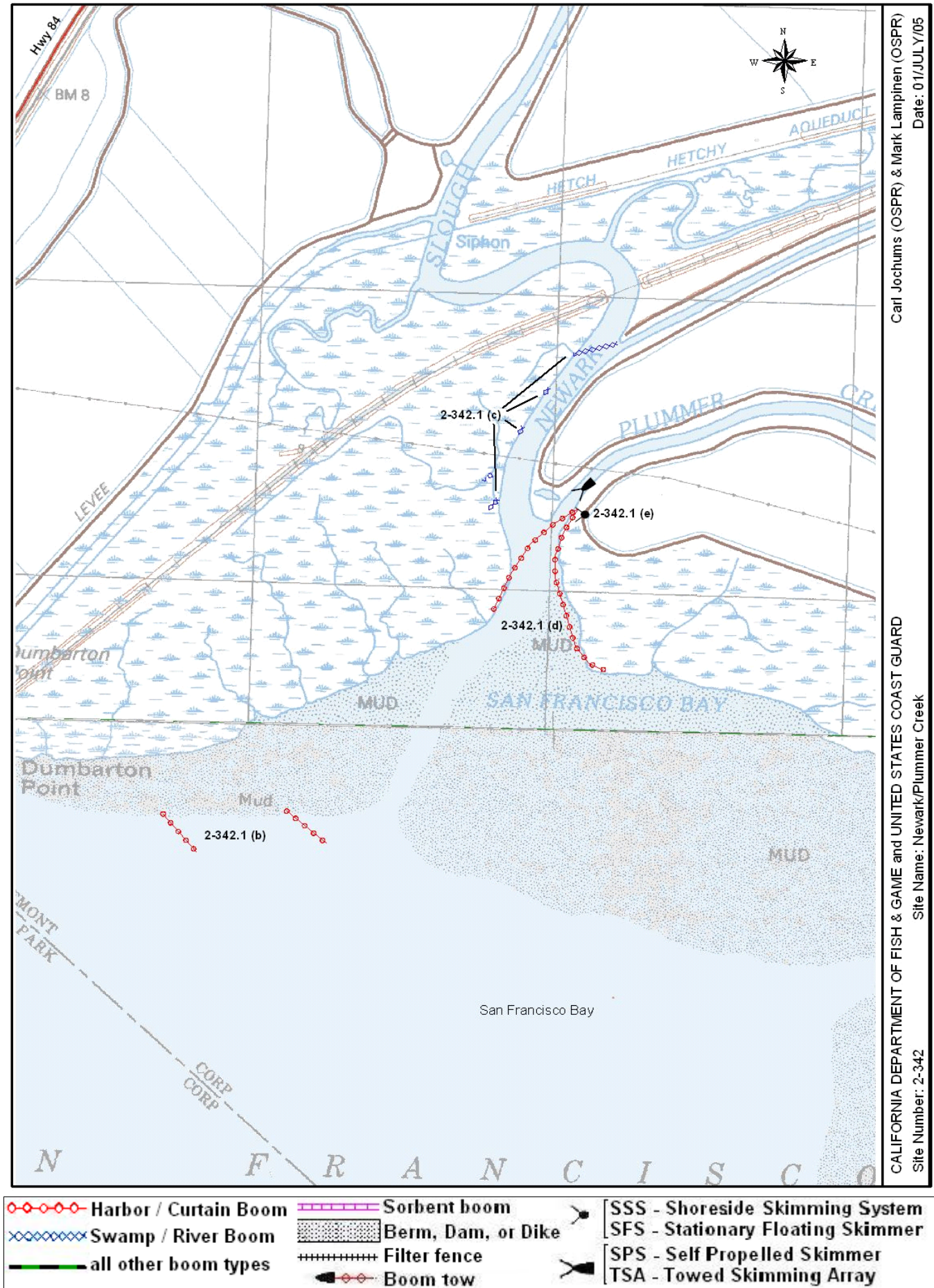
Launching, Loading, Docking and Services Available: Launch ramps at Redwood City for large vessels  
Small boat launch (punts, airboats, kayaks) at SFBNWR HQ on Newark Slough

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Large staging area available at Redwood City Harbor. Small staging area and field post possible at National Wildlife Refuge HQ. Command Post available at Alameda County OES.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



County: **Alameda**  
 USGS Quad: **Mountain View**

Thomas Guide Location

AAA Fremont - N

Latitude N

37 29.0

Longitude W

122 02.0

NOAA Chart: **18654 San Francisco Bay Southern Part**

Last Page Update : 7/1/1996

#### SITE DESCRIPTION:

A large linear marsh along the east side of south San Francisco Bay bounded on the northwest by Newark Slough, on the east by Cargill salt pond levees, and on the west by San Francisco Bay. The slough is a channel bordered by mudflats and marshes. The adjacent pickleweed and cordgrass marshes are included in this site (see above). Many primary slough channels are present along its length, conveying water into the interior portions of the marsh. Much of this site is included in the USFWS South San Francisco Bay National Wildlife Refuge.

#### SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority for protection year-round due to extreme vulnerability of saltmarsh and special status species/habitat (see below).

#### RESOURCES OF PRIMARY CONCERN

This is an extensive cordgrass marsh with pickleweed in the higher intertidal marsh.

The endangered California clapper rail (This is one of the most important California Clapper rail nesting areas in the So. Bay), Both the American Peregrine falcon, and California Brown pelican are present.

A CA Species of Special Concern that is present is the Salt Marsh Common Yellowthroat.

Shorebirds, waterfowl, wading birds, waterbirds, raptors are present at the site.

The endangered salt marsh harvest mouse is present as is a CA Species of Special Concern, the Salt Marsh Wandering Shrew, and harbor seals - can reach 350 adults and 100 pups during spring breeding season, and 70 seals during fall/winter. This is also the primary harbor seal rookery in SF bay.

Fish .

Invertebrates.

Pickleweed and cordgrass marshes

#### CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Ohlone cultural sites are nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

#### KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
E/T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E	Baylands Nature Preserve Office	Baylands Nature Preserve	(650) 329-2506
O	Scott Miner	US Army Corps of Engineers	(415) 503-6573
E	Butch Paredes	Cargill Salt	(510) 790-8165

#### ADDITIONAL SITE SUMMARY COMMENTS:

## 2-344 -A Site Strategy - Mowry Slough

County and Thomas Guide Location  
AAA Fremont - N Alameda

NOAA CHART  
18654 San Francisco Bay Southern Part

## 2-344 -A

Latitude N Longitude W  
37 29.0 122 02.0

### CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

The concern is to prevent oil from being carried into the marsh via large and small tidal channels and minimize oiling of marsh fronts. Should oil enter the marsh there will be injury and death of marsh vegetation, small mammals, shorebirds and waterfowl, including endangered and threatened species. There is also the concern that response and cleanup activity will result in trampling of marsh, trampling of oil into sediments, and disturbing wildlife. Please exercise appropriate caution.

### HAZARDS and RESTRICTIONS:

Levee roads impassable in winter. Shallow water. Seas to 2 feet.

### SITE STRATEGIES

Strategy 2-344.1 Objective: Deflect oil from marshes to be recovered on-water by skimmers. Prevent oil from entering the slough.

- Offshore mechanical collection with on-water recovery task force.
- Use 18" curtain boom or double layers of smaller boom to deflect oil from marshes into skimmer in Mowry Slough channel near mouth.
- "Plug" small slough channels along marshfront w/ fence boom or 4x4 swamp boom and sorbent booms.
- Line marsh front with bushy boom (oil snare) and/or sorbent booms.
- If possible use curtain boom at mudflat shelf break to deflect oil away from slough channel.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring		Boom boat	Skiffs punts	Skimmers		Special Equipment or comment		staff deploy	Staff tend
					no	type and gear			No	Type	No	and kinds		
2-344.1	1000	10000			50	50-25#w/10'chain each	4	3	1	self pro		hovercraft	18	

### LOGISTICS

**DIRECTIONS:** to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Access area through Cargill Plant (from north) and Durham Landfill (from south). A large linear marsh along the east side of south San Francisco Bay bounded on the northwest by Newark Slough, on the east by Cargill salt pond levees, and on the west by San Francisco Bay.

**LAND ACCESS:** 2WD,LG truck,4WD,ATV dry season, hovercraft in wet season

**WATER LOGISTICS:** Shallow draft vessels <6'

Limitations: depth, obstruction

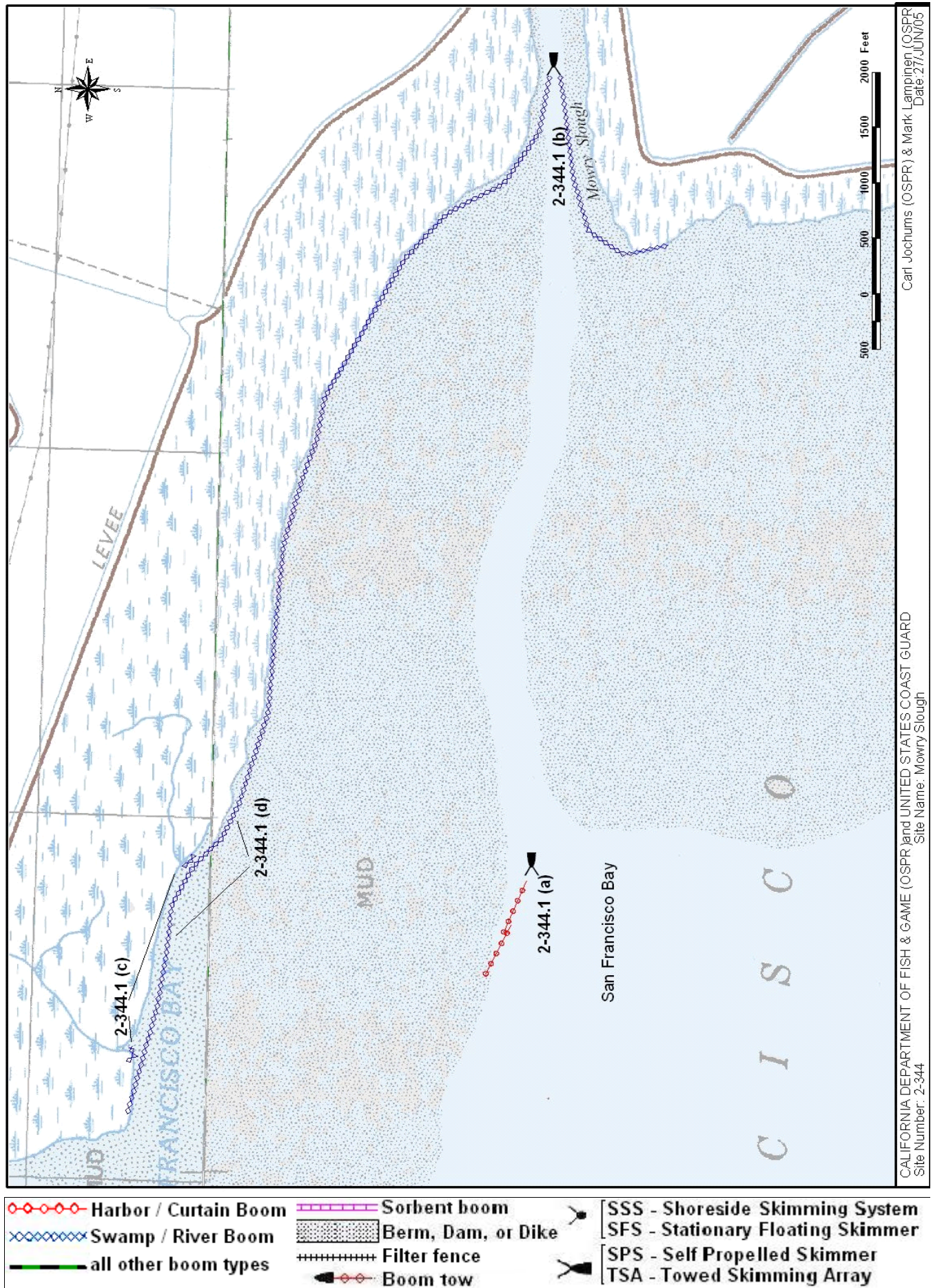
Launching, Loading, Docking and Services Available: Vessel launch ramp and services at Redwood City. Small vessels may launch in Newark Slough near National Wildlife Refuge HQ at high tide.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Large staging area available at Redwood City Harbor. Small staging area and field post possible at National Wildlife Refuge HQ. Command Post available at Alameda County OES.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



County: Alameda, Santa Clara

USGS Quad: Mountain View

Thomas Guide Location

Latitude N

37 28.0

Longitude W

122 02.0

NOAA Chart: 18654 San Francisco Bay Southern Part

Last Page Update : 7/1/1996

**SITE DESCRIPTION:**

This site extends from the mouth of Coyote Creek at the southeast corner of South San Francisco Bay upstream to Hwy 237 and includes all marshes and tributaries not included in other sites. Coyote Creek is the primary drainage for the Santa Clara Valley. The mouth is five miles southeast of the Dumbarton Bridge and the mouth is over a mile wide. Extensive marshes and mudflats occur near its mouth and along the creek's shores. The mudflat along the north shore has deeply carved channels (5 ft +) from the marsh to the deep water channel. Alviso Slough branches off its south side not far from the mouth.

**SEASONAL and SPECIAL RESOURCE CONCERN**

This site is "A" priority year-round as are all marshes, because of vulnerability of marsh plants and wildlife to oil.

**RESOURCES OF PRIMARY CONCERN**

There are extensive marshes and mudflats along the creek containing pickleweed and cordgrass. These marshes support a rich marsh flora and fauna including T&E species.

Sensitive bird species found here include: Endangered - California clapper rail, California least tern; Threatened - western snowy plover; California Species of Special Concern: saltmarsh common yellowthroat, Alameda song sparrow. Also, California brown pelican, American peregrine falcon, and large numbers of a wide variety of birds nest and winter here: shorebirds, waterfowl, wading birds, and waterbirds.

Sensitive mammals species found here include the endangered salt marsh harvest mouse and a species of special concern - the salt marsh wandering shrew. Harbor seals haul out along north side of creek.

The intertidal mudflats are important to fish and shellfish, primarily clams

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

There are probably historic and cultural sites present. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
O		SF Bird Observatory	(408) 946-6548
E/T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
O	Scott Miner	US Army Corps of Engineers	(415) 503-6573
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E	Butch Paredes	Cargill Salt	(510) 790-8165

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-346 -A Site Strategy - Coyote Creek

County and Thomas Guide Location

Alameda, Santa Clara

NOAA CHART

18654 San Francisco Bay Southern Part

## 2-346 -A

Latitude N

Longitude W

37 28.0 122 02.0

### CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

Primary concern is to stop oil from entering (or, if oil originates inland, leaving) the Creek by exclusion booming the mouth. Once oil has entered the creek, the concern is that oil will be transported to the interior of bordering marshes via the deep side tidal channels. If marshes become oiled, concerns are that marsh may become damaged by cleanup and foot traffic and oil may be trampled into sediments. Minimize damage to plants, wildlife and birds from foot traffic.

### HAZARDS and RESTRICTIONS:

Aircraft, beware of overhead power lines and towers. Vessels beware of shallow water.

### SITE STRATEGIES

Strategy 2-346.1 Objective: Deflect oil away from marshes, keep oil in deep water channel & skim

a. Deflection boom placed off NW point at creek mouth. Possibly use 8000 ft of 4x4 swamp boom across marsh and mudflat then connect to harbor boom in channel to deflect oil away from marsh and mudflats into deep water channel.

b. Short segments of 9X9+ Hboom deflection can be placed along north side mudflat to keep oil in channel. Can use powerline tower supports as boom attachment points.

c. Skimmers (3 SPS) to operate at mouth of Coyote Creek, at split of Alviso Slough and Coyote Creek.

Strategy 2-346.2 Objective: exclusion of mouths of small tidal channels to inner marshes.

"Plug" small slough channels along marshfront on N. side with approximately 400 ft of fence boom or 4x4 swamp and sorbent booms.

Strategy 2-346.3 Objective: Protective booming of windward shores to prevent oil from being carried into marshes by wave and tidal action

Line marshfront with 4000 ft of oil snare, swamp boom, or sorbent boom.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or kinds	comment	staff deploy	Staff tend
2-346.1	8000	200			30 many large	8	3	3 SPS			30	
2-346.2	0	400		400	25 many + stakes	1	1				8	
2-346.3	0	4000	4000 SN									

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Take Hwy 880 south and exit at West Warren Avenue. Turn right on West Warren Avenue and follow it to Fremont Blvd. Turn right on Fremont Blvd. and left on the next road. Follow this road to where it crosses a dirt road. Turn right and follow this road to where it crosses Coyote Creek (first collection point) and follow it across to the dead end slough to the second collection point. Access to Coyote Creek and Mowry Slough is possible through Durham Landfill off of Automall Road. South side access available through Alviso to Cargill and refuge property. This site extends from the mouth of Coyote Creek at the southeast corner of South San Francisco Bay upstream to Hwy 237 and includes all marshes and tributaries not included in other sites.

**LAND ACCESS:** 2WD,LG TRK,4WD,ATV When levees are dry.

**WATER LOGISTICS:** Very shallow, beware of tides.

Limitations: depth, obstruction

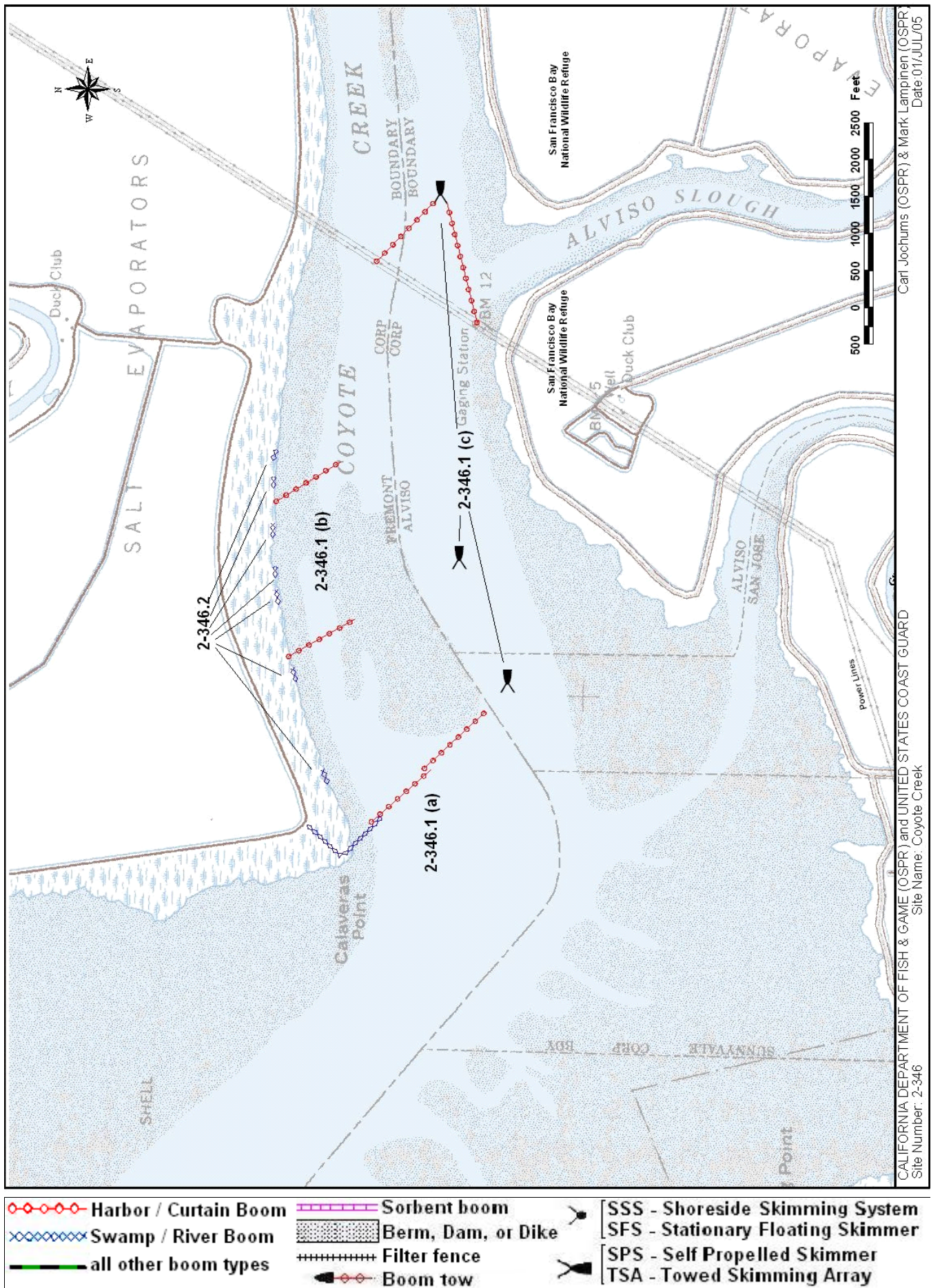
Launching, Loading, Docking and Services Available: Launch ramp at Redwood City and possibly at Alviso Slough for g□smaller boats at high tide.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

USFWS South Bay Refuge may be a useful field post and staging area. Cargill Salt is another proximal location providing use can be negotiated.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



County: **San Francisco**  
USGS Quad: **San Francisco North**

Thomas Guide Location  
AAA - San Franc

Latitude N  
3 7 46

Longitude W  
122 23

NOAA Chart: **Entrance to San Francisco Bay**

Last Page Update : 10/1/2002

**SITE DESCRIPTION:**

This site is the shoreline of San Francisco from Bay Bridge south to Islais Creek at Pier 90. This shoreline consists of man-made structures including piers, seawalls and riprap. The bottom of the channels generally consists of soft sediments. Currents can be strong, approaching 6 knots.

**SEASONAL and SPECIAL RESOURCE CONCERN**

Herring spawn during the winter (November through April). There are economic concerns throughout.

**RESOURCES OF PRIMARY CONCERN**

Aquatic vegetation and invertebrates growing on pilings, seawalls and riprap may be injured by oil and cleanup activities. Herring spawn on these surfaces during the winter months.

Sea birds are present throughout the year.

Herring spawn here in the winter. Fish are present throughout the year.

Algae and invertebrates live on all surface pilings.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
E	Carol Bach	Port of San Francisco	(415) 274-0568
O	Richard Lee	SF Dept Public Health	(415) 554-9000

**ADDITIONAL SITE SUMMARY COMMENTS:**

**CONCERNS and ADVICE to RESPONDERS:**

Last Page Update : 10/1/2002

This collection strategy should be used to take advantage of the slow water between piers and the boats at anchor to divert oil out of swifter along shore currents to shoreline where collection is possible.

**HAZARDS and RESTRICTIONS:**

There are sunken obstructions to navigation in many areas, sunken vessels and old pier pilings.

**SITE STRATEGIES**

Strategy 2-350.1 Objective: Economic Objective: Exclude from intakes pier 72 - stop oil from entering the power plant cooling water intake.

Deploy 1000 feet of 9X9+ Hboom along the shore from the foot of pier 70 to the southeast corner of pier 72, anchoring the ends at the pier or seawall. Anchor the middle of this boom 50 to 100 feet offshore.

Strategy 2-350.2 Objective: Deflection to Collection for shoreside skimming

600 feet of 9X9+ Hboom may be deployed from the southeast corner of pier 70 to collect oil on the flood tide. Use sorbent to back the collection pocket. The oil may be collected against the seawall north of the power plant intake. Alternative is deflected to a self propelled skimming vessel.

**Table of Response Resources**

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	tvpe and gear	Boom boat	Skiffs punts	Skimmers No	Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-350.1	1000				3	22#+	1	1				8	
2-350.2	600	0	0	100	0		1	1	1 SSS	0		5	

**LOGISTICS**

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Boat launch ramp near Pier 50 at Mission Rock Resort, 817 China Basin St. Shoreline access from the Embarcadero and China Basin St. This site is the shoreline of San Francisco from Bay Bridge south to Islais Creek at Pier 90.

**LAND ACCESS:** There is access for large trucks on most piers and seawalls.

**WATER LOGISTICS:** There are underwater obstructions to navigation.

Limitations: depth, obstruction

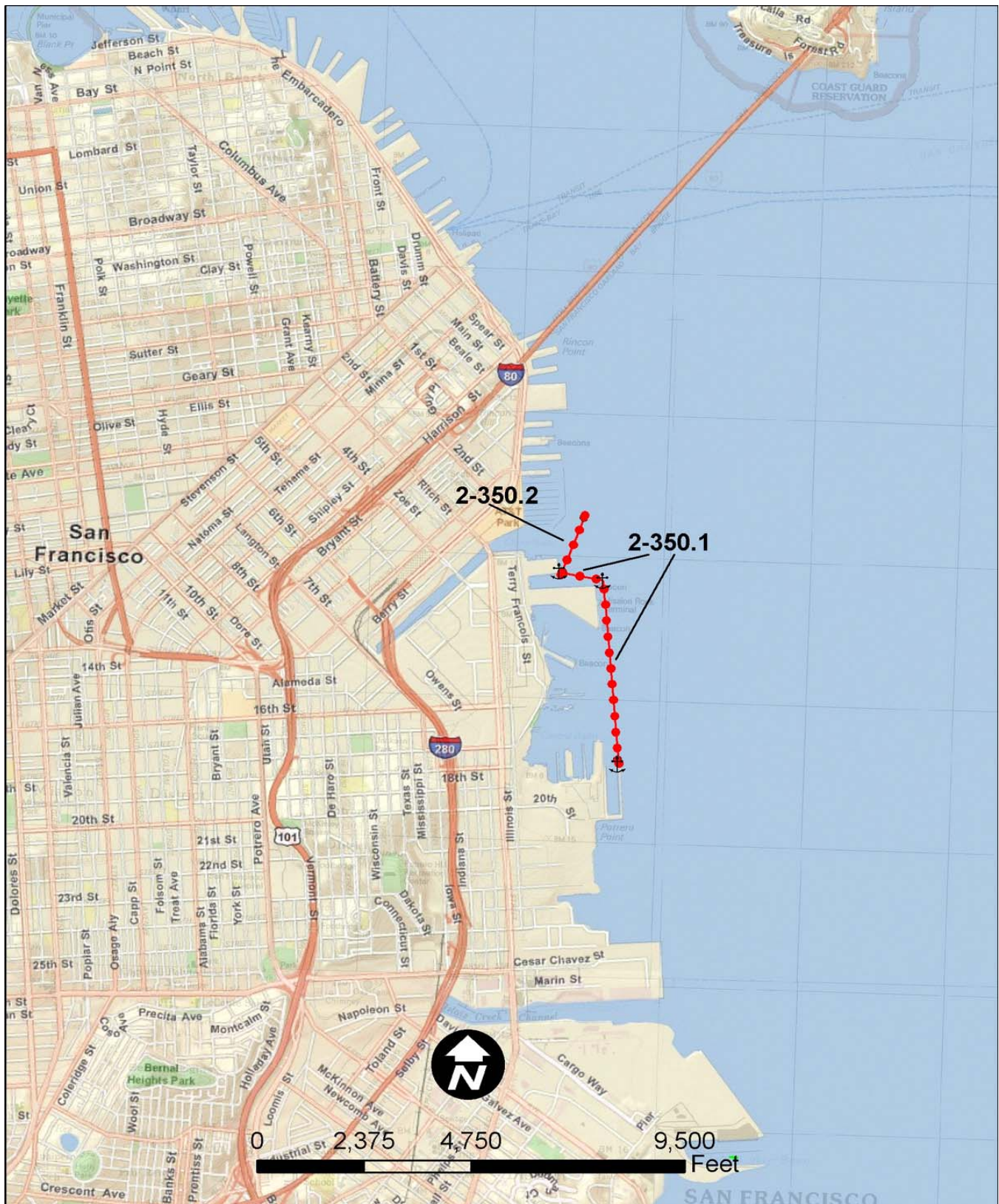
Launching, Loading, Docking and Services Available: Boat launching is available near Pier 50 at Mission Rock Resort, 817 China Basin St.

**FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:**

Flat paved areas for staging and field posts are common throughout this area.

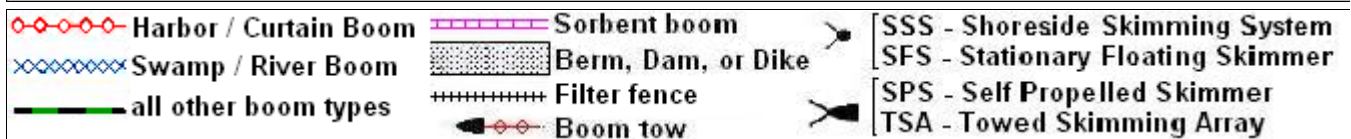
**COMMUNICATIONS PROBLEMS:****ADDITIONAL OPERATIONAL COMMENTS:**

## 2-350 -E/X Strategy Diagram- San Francisco South Collection/Economic Strategies 2-350 -E/X



CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD  
 Site: 2-350 Site Name: San Francisco S. Collection / Economic Strategies  
 Source: basemap provided by ESRI ArcGIS Online Services

Mike Schommer (OSPR) & Greg Ewing (OSPR)  
 Date: March 22, 2011



## 2-351 -B/A Site Summary- Yerba Buena Island

2-351 -B/A

County: **San Francisco**  
USGS Quad: **Oakland, West**

Thomas Guide Location  
AAA - San Franc

Latitude N  
3 7 46

Longitude W  
122 23

NOAA Chart: **Entrance to San Francisco Bay**

Last Page Update : 1/1/1994

### SITE DESCRIPTION:

Yerba Buena Island is the prominent rocky island mid-span of the Bay Bridge. The sensitive portion of the shoreline is the southerly shore from the lighthouse at the south tip to just north of the west Bay Bridge span (just short of the underwater cable crossing). There are small cobble pocket beaches on the south side of the island which are used by pinnipeds and birds.

### SEASONAL and SPECIAL RESOURCE CONCERN

"A" protection priority during harbor seal pupping season 15 March to 10 June, "B" priority balance of the year.

### RESOURCES OF PRIMARY CONCERN

Coarse grain beaches and steep rocky slopes are haul outs for pinnipeds and birds.

Although this area is used for resting for birds, primary sensitivity is pinniped use.

Harbor seal rookery during spring when 30 to 50 seals use the site when tide is below +3 feet above mean lower low water. 100 to 250 seals haul out at this site during the winter.

### CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

### KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
O	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
E	IMD USCG-YBI	USCG	(415) 399-3543

### ADDITIONAL SITE SUMMARY COMMENTS:

## 2-351 -B/A Site Strategy - Yerba Buena Island

County and Thomas Guide Location

AAA - San Franc San Francisco

NOAA CHART

Entrance to San Francisco Bay

## 2-351 -B/A

Latitude N

Longitude W

3 7 46

122 23

Last Page Update : 10/1/2002

### CONCERNS and ADVICE to RESPONDERS:

The concern is oiling of beach where oil will become hazardous to seals using the site. Injury and death to be expected if harbor seal pups inhale or ingest oil. There is high risk of pups ingesting oil while nursing if mothers become oiled. Minimize disturbance of seals during deployment.

### HAZARDS and RESTRICTIONS:

Potential for 3 foot seas. Most of the water is very deep close to shore but there are occasional rocks and pilings. There are underwater cables just north of the Bay Bridge. Approach by foot is extremely hazardous because of steep cliff face.

### SITE STRATEGIES

#### Strategy 2-351.1 Objective: Protective booming of beach and rocks used by seals.

Deploy 3,000 feet of 9X9+ Hboom parallel to the shoreline around the south side of the island to keep oil off the pocket beaches between lighthouse point and the west span of the Oakland Bay Bridge. Great care must be taken to prevent oil from getting behind the boom at either end throughout the tidal cycle. A 200 foot deflection boom should be in place at the west end of the boom during the flood tide. (A similar deflection may be necessary at the east end of the boom under some wind and tide conditions.)

Anchoring Recommendations: Waters are very deep at the shore and there are relatively few obstructions. The east end of the boom may be fastened or anchored off the the lighthouse ( there is an EYE bolt embedded in the rock below the lighthouse which may be helpful). The west end of the boom should be anchored west of the sand and gravel beaches just south of the western span of the Bridge. Few midpoint anchors are needed because the boom is deployed parallel to straight shorelines and currents are minimal near the shoreline. (Although the tidal currents are strong, they run parallel to the shore in these areas.) Midpoint anchors are needed primarily to keep the boom off the shoreline. Danforth anchors are satisfactory in the soft bottoms off the beaches where seals haul out, but Northhill anchors should be used on the rocky bottom below the lighthouse. The boom may be attached to the dolphin pilings off the beaches.

#### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-351.1	3000				7 7/25# w/ 20' 1/2" chain	3	1	1	3000' 1/2" anchor line	11	

### LOGISTICS

#### **DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Boat access is designated method of approaching this site. Foot access to pocket beaches is either minimal, extremely dangerous, or impractical due to steep cliffs. There is vehicle access to site: take Highway 880 to westbound Highway 80; get on the Oakland Bay Bridge; while still on the Bridge take the Yerba Buena Island exit (Hillcrest Rd); follow signs to the USCG Station. There is access for foot traffic from parking lot above vice-admiral's house; walk south to cliff or lighthouse and descend to beach. Yerba Buena Island is the prominent rocky island mid-span of the Bay Bridge. The sensitive portion of the shoreline is the southerly shore from the lighthouse at the south tip to just north of the west Bay Bridge span (just short of the underwater cable crossing).

**LAND ACCESS:** Poor to impossible access from land by foot only.

**WATER LOGISTICS:** Water is deep and fairly unobstructed along this margin.

Limitations: depth, obstruction

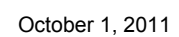
Launching, Loading, Docking and Services Available: Estuary Park & Fifth Ave. Marina, Oakland; Ballena Isle Marina, Alameda; Emeryville Marina; Berkeley Marina, Berthing at Treasure Island Marina. There is a boat launch at the Treasure Island Yacht Club.

#### **FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:**

Space for large staging area, and field post or Command Post is available on Treasure Island. Contact YBI USCG for boom staging at USCG base.

#### **COMMUNICATIONS PROBLEMS:**

**ADDITIONAL OPERATIONAL COMMENTS:** Bottom type - hard mud, shell, rocks. Possible staging and collection site at USCG station or US Navy facility. Boom (slick bar) on-scene in water at Treasure Island Navy docks. Contact USCG at YBI and US Navy at TI.



County: **San Francisco**  
USGS Quad: **San Francisco South**

Thomas Guide Location

Latitude N  
3 7 43

Longitude W  
122 23

NOAA Chart: **18649/18650 Entrance to SF Bay**

Last Page Update : 10/1/2002

**SITE DESCRIPTION:**

South Basin lies between Hunter's Point and Candlestick Point on the San Francisco Peninsula. Yosemite Canal/Slough extends inland to the northwest from South Basin and is the site of a major salt marsh restoration project beginning in 2011. At the head of South Basin is a narrow fringing marsh and mudflat, shores along Candlestick Point are sandy beaches and riprap, the remainder of the shoreline is concrete slab riprap.

**SEASONAL and SPECIAL RESOURCE CONCERN**

"B" protection priority year round. During the fall and winter months, high concentrations of waterfowl (1,000's) and migratory shorebirds are present.

**RESOURCES OF PRIMARY CONCERN**

There are fringe marshes and tidal mudflats of importance at this site.

Waterfowl and shorebirds use this site throughout the year but particularly in winter when large numbers gather here. During the fall and winter months, high concentrations of waterfowl (1,000's) and migratory shorebirds are present.

Eelgrass beds are present.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
E	Supervising Ranger	CA State Parks	(415) 435-8339
E	Archaeologist	CA State Parks (use ext 216)	(707) 769-5652
E	Environmental Scientist	CA State Parks	(831) 335-6382
E	Central Dispatch	CA State Parks	(831) 649-2810
E	Diablo Vista District	CA State Parks	(707) 769-5652

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-352 -B Site Strategy - South Basin, Hunters Point

County and Thomas Guide Location

San Francisco

NOAA CHART

18649/18650 Entrance to SF Bay

## 2-352 -B

Latitude N

3 7 43

Longitude W

122 23

Last Page Update :

### CONCERNS and ADVICE to RESPONDERS:

This site is used by large numbers of birds, particularly in fall/winter, and there are marshes and mudflats which are vulnerable to oiling, including a large restoration site within Yosemite Slough. The primary concern is to keep oil out of pocket coves by exclusion booming and collection. Always a concern is that response and cleanup will result in impacts: avoid disturbing wildlife, trampling vegetation, tearing up eelgrass beds with anchors and boat props, and tracking oil into marsh and mudflat sediments.

### HAZARDS and RESTRICTIONS:

Vessels beware of shallow waters and obstructions.

### SITE STRATEGIES

Strategy 2-352.1 Objective: Exclusion/protection booming to prevent oil from reaching marsh in South Basin or beaches at Candlestick Point.

- Deploy 1,500 ft. of 9X9+ Hboom across narrowed opening to inner South Basin to exclude oil from marsh and mudflat. Place skimmer at apex of boom if oil collects here.
- Deploy 2,000 ft of 9X9+ Hboom in a J-hook configuration from middle point at the opening of the inner South Basin to the inside of Candlestick Point. Place skimmer or vacuum truck hose at J-hook pocket near shore if oil collects here.

Strategy 2-352.2 Objective: Deflect oil away and past site.

Deploy deflection with 500 ft of 9X9+ Hboom off end of Navy pier.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-352.1	3500				5 5 / 22+ / Danforth with chain	3	0	2 SFS/SSS	*shallow draft Bboat	15	
2-352.2	500				2 2/22+ / danforth	1	0		*shallow water Bboat	3	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Site is south of San Francisco at Candlestick Point area. Exit Hwy 101 at Candlestick (3Com Park) exit and proceed bayward past 3COM Stadium to Candlestick Point State Recreation Area. South Basin lies between Hunter's Point and Candlestick Point on the San Francisco Peninsula. Yosemite Canal/Slough extends inland to the northwest from South Basin and is the site of a major salt marsh restoration project beginning in 2011.

**LAND ACCESS:** Good access all types: contact Park Maintenance.

**WATER LOGISTICS:** Shallow water and obstructions.

Limitations: depth, obstruction

Launching, Loading, Docking Oyter Pt marina, ramps near piers 70 and 50.

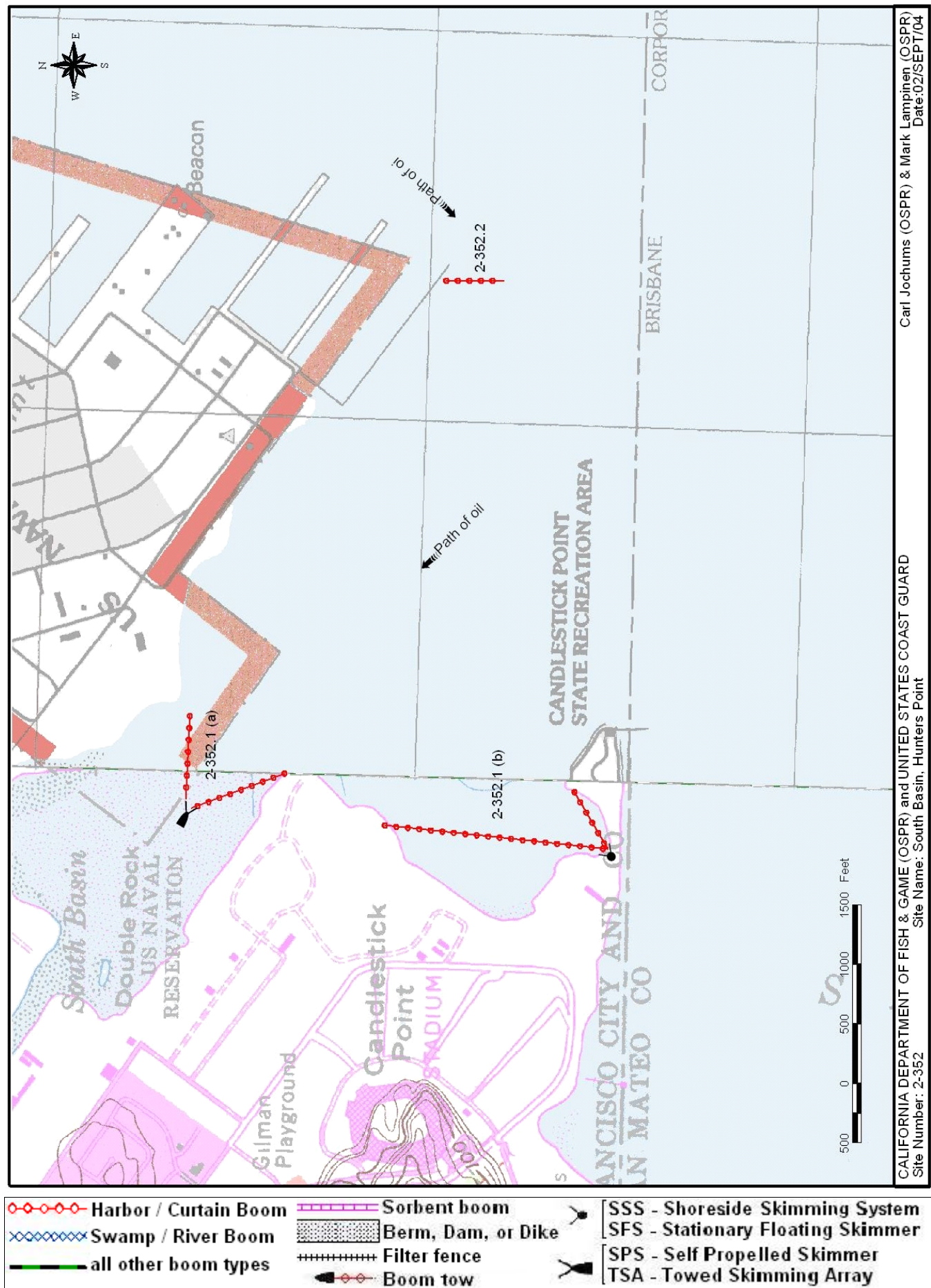
and Services Available:

**FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:**

Staging at Candlestick Point. Access restricted from land for heavy trucks. Contact Park Maintenance.

**COMMUNICATIONS PROBLEMS:**

**ADDITIONAL OPERATIONAL COMMENTS:**



County: **San Francisco**  
USGS Quad: **San Francisco South**

Thomas Guide Location

Latitude N  
37 44.3

Longitude W  
122 22.5

NOAA Chart: **18649/18650 Entrance to SF Bay**

Last Page Update : 10/1/2002

**SITE DESCRIPTION:**

This site includes the entire north margin of India Basin and the land north of the power plant discharge channel. This wetland park is undergoing restoration. It is a narrow peninsula with high ground, about 8 acres of tidal marsh, and mudflat shores. The site has been graded to create a combination of pools and high grounds with walking paths. There are several small tidal inlets on the south and west margins (about 500 ft total length) which admit tidal exchange to interior ponds. There is a channel with power plant cooling water discharge at the southwest edge. The bay to the south is exceedingly shallow. The north side is a riprap/pebble shore with low sensitivity. The site is undergoing natural revegetation, and the marshy vegetation is not very developed at this time. With time it may become increasingly sensitive as marsh vegetation and the marsh community develops fully. For this reason it is now an A-level site.

**SEASONAL and SPECIAL RESOURCE CONCERN**

Marshes have A-sensitivity and priority protection at all times.

**RESOURCES OF PRIMARY CONCERN**

This is a wetland restoration site. It has high ground vegetation, pickleweed marsh, and saltmarsh ponds and lagoons. The site is surrounded by mudflats.

A variety of water birds, shorebirds and upland songbirds are present. Because there is very little marsh habitat on the San Francisco Peninsula, this site has high habitat value.

Potentially this site is suitable for endangered saltmarsh harvest mouse.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

None likely since this site was created by wetland filling.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
BEL	Carol Bach	Port of San Francisco	(415) 274-0568
LEB	David Hayes	CA Coastal Conservancy	(510) 286-0736

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-353 -A Site Strategy - Heron's Head Park - India Basin

County and Thomas Guide Location

San Francisco

NOAA CHART

18649/18650 Entrance to SF Bay

## 2-353 -A

Latitude N

Longitude W

37 44.3 122 22.5

Last Page Update : 10/1/2002

### CONCERNS and ADVICE to RESPONDERS:

The tidal inlets could admit oil to the lagoons, ponds, and low marsh areas on this site. As emergent marshes develop along shorelines, these would also be vulnerable to oil impacts. Exclude oil from all inlets and protect shorelines or deflect away. Avoid trampling marsh vegetation. This is a marsh restoration site.

### HAZARDS and RESTRICTIONS:

This basin is very shallow - follow the stakes which mark the channel.

### SITE STRATEGIES

Strategy 2-353.1 Objective: Exclude oil from entering small tidal inlets to inner ponds and lagoons.

Close small tidal inlets with shore sections of swamp (river) boom 4X4+ (80 ft) and back with sorbent boom. Stake in place. Several openings are along south middle margin of the site and one at the end of a rock wall opposite the power plant. This can be most easily accomplished by land deployment.

Strategy 2-353.2 Objective: Deflect when oil is likely to enter India Basin, such as easterly winds, deflect oil away from site to south shore. Protect emergent marsh located on the south shore of Indian Basin.

Deploy 2,500 feet of 9X9+ Hboom from the tip of the east end of the spit to the south shore of India basin, east of the emergent marsh. Deploy at an angle to the prevailing wind so that the oil will slide down the boom to the south shoreline where the oil can be collected at the shoreline with shore-based skimming equipment. The boom may be cascaded if that will make it easier to deploy. Stakes may be helpful to keep the boom from forming catenary pockets. Boom can be delivered to site by boat or vehicle. Sites on south side can enable rapid recharge of boom boats from shore support. A cascade may be necessary to admit boat traffic to boat launch at India Basin Park.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-353.1	0	200		200	12 stakes					2	
2-353.2	2500				4 4/22+/danforths & stakes	4	1			12	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

By boat the site is at the back of India Basin: proceed south along the SF waterfront about 4 miles from the Bay Bridge and turn west into India Basin just north of Hunters Pt. - Pt. Avisadero (Light G 5). By vehicle, exit Hwy 101 south of SF center at Army St. Continue east toward Bay on Army and turn south (right) on Evans Ave. Evans Ave becomes Hunters Point Blvd. India Basin Shoreline Park is on the left and there is a marina at Griffith St. This site includes the entire north margin of India Basin and the land north of the power plant discharge channel.

**LAND ACCESS:** Foot & ATV on site. All types on south shore of India Basin.

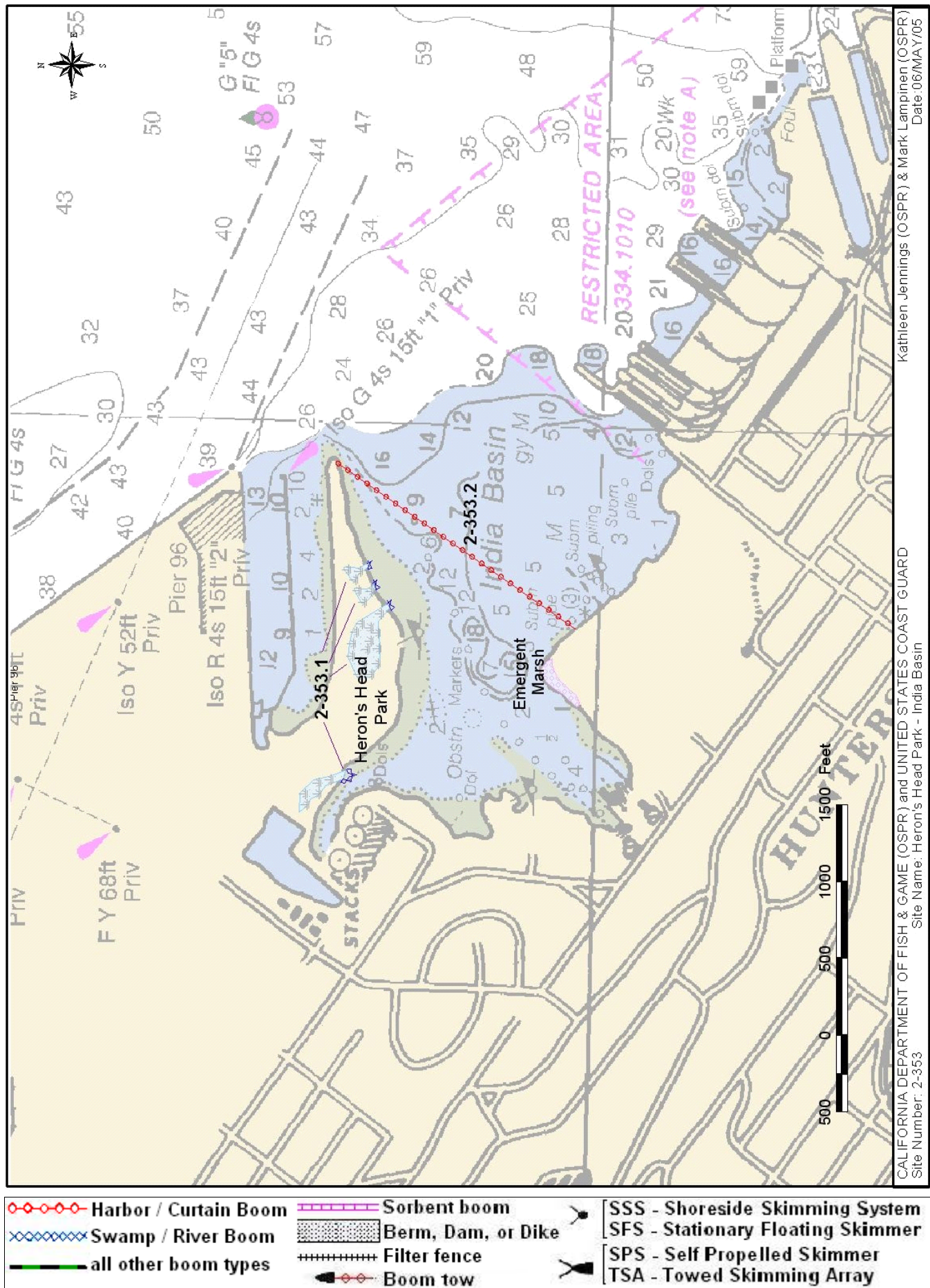
**WATER LOGISTICS:** Very shallow < 4' in most of basin and shallower at shore.  
Limitations: depth, obstruction  
Launching, Loading, Docking Launch on south shore of basin.  
and Services Available:

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging on south shore of India Basin.

**COMMUNICATIONS PROBLEMS:** No Problems

### ADDITIONAL OPERATIONAL COMMENTS:



County: **San Francisco**  
USGS Quad: **San Francisco South**

Thomas Guide Location

Latitude N  
37 44.3

Longitude W  
122 22.5

NOAA Chart: **18649/18650 Entrance to SF Bay**

Last Page Update : 10/1/2002

**SITE DESCRIPTION:**

This 10+ acre site is the corner of Pier 94 at the south edge of the mouth of Islais Creek Channel and extends from Pier 96 back into the channel about a third of a mile. It is a narrow 200+ yard wide parcel along the south side of the channel with high ground and about 5 acres of high saltmarsh. The site had been undergoing fill and there are mounds of rubble interspersed across the pickleweed and saltgrass marsh. The north side is a rip rapped shore with low sensitivity. There is a small tidal inlet on the east margin near the Pier 96 wharf which admits tidal exchange to an interior marsh. This site has "A" sensitivity because it is a wetland under restoration and has heavy waterbird and shorebird use during winter.

**SEASONAL and SPECIAL RESOURCE CONCERN**

This site has "A" sensitivity because it is a wetland under restoration and has heavy waterbird and shorebird use during the winter migration.

**RESOURCES OF PRIMARY CONCERN**

This site is traditional saltmarsh that has undergone some filling. It provides valuable wetland habitat in a heavily industrialized portion of the Bay. It has demolition debris fill, high ground vegetation, pickleweed marsh, and saltmarsh ponds. The perimeter is riprap.

A variety of water birds, shorebirds and marsh birds.

This is possible endangered saltmarsh harvest mouse habitat.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
E	City of San Francisco	San Francisco, City and County of	(415) 701-2323

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-354 -A Site Strategy - Islais Creek - Pier 94 Saltmarsh

County and Thomas Guide Location

San Francisco

NOAA CHART

18649/18650 Entrance to SF Bay

## 2-354 -A

Latitude N

Longitude W

37 44.3 122 22.5

Last Page Update : 10/1/2002

### CONCERNS and ADVICE to RESPONDERS:

The tidal inlet could admit oil to the ponds and low marsh areas on this site. The openings are at the east end and can be protected with exclusion booming at the inlet and protective booming just offshore. Avoid trampling marsh vegetation. This is a marsh restoration site.

### HAZARDS and RESTRICTIONS:

Riprap poses slip, trip and fall hazards. Vessels beware of submerged objects and shallows at margins.

### SITE STRATEGIES

Strategy 2-354.1 Objective: Exclude oil from entering inlet and protect site from oil.

- Place a length of boom at opening of rocks near Pier 96 wharf and back with sorbent. Stake in place.
- Deploy 1,000 feet of 9X9+ Hboom from Pier 94 to the south shore of the entrance to Islais Creek.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-354.1	1000	50		50	3 3/22+/danforths & stakes	1	1			3	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

By boat the site is at the south margin of the mouth of Islais Creek Channel (which is Pier 94): proceed south along the SF waterfront about 4 miles from the Bay Bridge to Islais Creek Channel (just south of Army St. Terminal-North Container Terminal -Pier 80). By vehicle, exit Hwy 101 south of SF center at Army St. Continue east toward Bay on Army and turn south (right) on 3rd St. and then left on Cargo Way. Access through industrial drives toward bay - Pier 94 and Pier 96. This 10+ acre site is the corner of Pier 94 at the south edge of the mouth of Islais Creek Channel and extends from Pier 96 back into the channel about a third of a mile.

**LAND ACCESS:** Foot & ATV on site. All types to adjacent piers.

**WATER LOGISTICS:** Submerged objects and shallows at margins.

Limitations: depth, obstruction

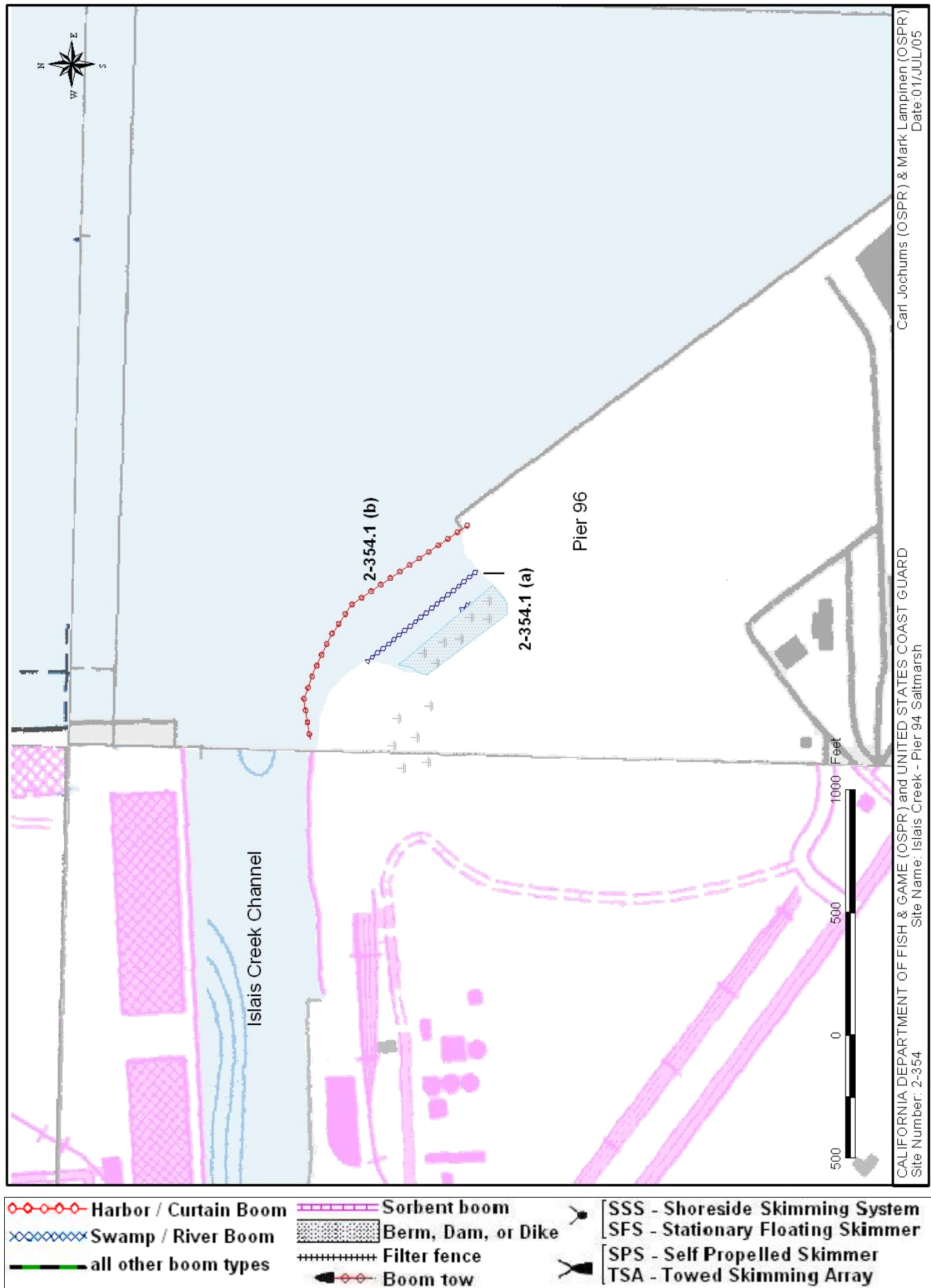
Launching, Loading, Docking and Services Available: Launch on south shore of India Basin or at South Beach Marina near the Bay Bridge, where there are facilities, fuel and mooring.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging on Pier 96 or Pier 80, either side of the channel.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



County: San Francisco

Thomas Guide Location

Latitude N

Longitude W

USGS Quad: San Mateo

3 7 36

122 22

NOAA Chart: 18649/18650 Entrance to SF Bay

Last Page Update : 10/1/2002

**SITE DESCRIPTION:**

This site is fringing marsh and a large tidal mudflat in a cove between the San Francisco International Airport runway and Coyote Point. The cove is a deeply recessed crescent to the west with riprap on some shores. In the eastern part of the site, along the south shore, two openings allow tidal flow to marshes behind the riprap shore. The eastern-most opening is Sanchez Creek. Shallow water and obstructive debris are present throughout this area.

**SEASONAL and SPECIAL RESOURCE CONCERN**

"A" protection priority year-round.

**RESOURCES OF PRIMARY CONCERN**

The major habitat types present are marshes, mudflats, and riprap. The marsh is at the back of the cove at the northwest margin and behind the riprap in the south side. Tidal mudflats span the site.

The endangered California clapper rail is a resident of the marsh. The cove serves as a feeding and resting area for waterfowl, wading birds and shorebirds. The mudflat is a feeding area for shorebirds. Waterfowl and shorebird use is highest in the fall and winter.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
E	City of San Francisco	San Francisco, City and County of	(415) 701-2323

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-361 -A Site Strategy - Airport Mudflat

County and Thomas Guide Location

San Francisco

NOAA CHART

18649/18650 Entrance to SF Bay

## 2-361 -A

Latitude N

3 7 36

Longitude W

122 22

### CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

This site is used by endangered birds to breed and many other birds throughout the year for resting and feeding. The primary concern is to keep oil from entering the marshes and to keep oil out of the cove where birds gather. In addition, response activity itself can be severely damaging: avoid harassing wildlife, trampling marsh plants, treading oil into marsh and mud, or disturbing the tidal flat bottom.

### HAZARDS and RESTRICTIONS:

Aircraft beware: this is in or near S.F. International Airport restricted airspace; hazards from incoming planes. Vessels beware of shallow water and submerged obstructions.

### SITE STRATEGIES

Strategy 2-361.1 Objective: Exclude oil from entering slough openings and cove.

- a) Deploy 7,600 ft of 9X9+ Hboom along the outer edge of the intertidal mudflat to exclude oil from the marsh. Line boom from SE corner of runway along mudflat to rip rap on southern shoreline.
- b) Exclude oil from entrance to "pond" on south shore with 200 ft. of 9X9+ Hboom doubled back across entrance (100 ft. across two times)
- c) Exclude oil from Sanchez Creek, a rip rapped slough channel leading to the large marsh along freeway. Deploy 400 ft. of 9X9+ Hboom in apex configuration out from channel entrance with two 200 ft legs each.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-361.1	8200				35 35/20-40/danforth w chain	4	4		4 shallow draft boomboats	28	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Vehicle access available near the shoreline: From Hwy 101, exit on Millbrae and drive along shoreline on Bayshore Hwy and Airport Blvd., or exit on Peninsula Ave and proceed bayward on Coyote Point Drive to Coyote Point County Recreation Area and Coyote Point Marina. This site is fringing marsh and a large tidal mudflat in a cove between the San Francisco International Airport runway and Coyote Point.

**LAND ACCESS:** Large truck.

**WATER LOGISTICS:** Extremely shallow waters and obstructions are limiting.

Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Coyote Pt. Marina and Oyster Pt. Marina

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at Coyote Point Marina, Oyster Point Marina, possibly SF airport, and parking lots along south shore.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



County: **San Mateo**  
 USGS Quad: **Redwood Point, California**

Thomas Guide Location

Latitude N  
 37 33  
 Longitude W  
 122 15

NOAA Chart: **18649/18650 Entrance to SF Bay**

Last Page Update : 1/15/2007

#### SITE DESCRIPTION:

This site includes the length of Belmont Slough and branching sloughs (Bay Slough) and the saltmarsh and mudflat frontage at the Bay front. Belmont Slough is a narrow channel on the southwest shore of South San Francisco Bay, one mile south of the San Mateo-Hayward Bridge. Marsh and mudflat are present at the mouth and along its banks. There is a large bay front saltmarsh between the bay and Bay Slough. The mudflat bayward of the marsh is very wide and shallow. It is part of San Francisco Bay National Wildlife Refuge and California Department of Fish and Game Redwood Shores Ecological Reserve.

#### SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority all year. Endangered species are present all year.

#### RESOURCES OF PRIMARY CONCERN

Main habitats of concern are bay front and slough margin saltmarsh and extensive tidal mudflats.

Sensitive bird species found here include: Endangered - California clapper rail, California least tern; California Species of Special Concern: saltmarsh common yellowthroat, Alameda song sparrow. Also, California brown pelican, American peregrine falcon, and large numbers of a wide variety of birds nest and winter here: shorebirds, waterfowl, wading birds, and waterbirds.

Sensitive mammals species found here include: endangered salt marsh harvest mouse and California species of special concern - salt marsh wandering shrew. Harbor seals frequent this site.

The sloughs and mudflats are important habitat for fish, shellfish and infauna and foraging habitat for birds.

#### CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

#### KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E	office San Mateo County Planning	San Mateo, County of, Planning and Building	(650) 363-4849

#### ADDITIONAL SITE SUMMARY COMMENTS:

## 2-362 -A Site Strategy - Belmont Slough

County and Thomas Guide Location

San Mateo

NOAA CHART

18649/18650 Entrance to SF Bay

## 2-362 -A

Latitude N

Longitude W

3 7 33

122 15

Last Page Update : 1/15/2007

### CONCERNS and ADVICE to RESPONDERS:

The concern is oil and response impacts to marsh, wildlife, and rare and endangered birds, animals and plants which are present year-round. Primary objective is to minimize exposure by excluding oil from entering Belmont Slough. Secondary objective is to minimize exposure and impacts to bay frontage marshes by protective booming. Always of concern is the impacts resulting from response and cleanup: avoid trampling marsh and sensitive plants and animals, avoid disturbing soft mudflats, and avoid trampling oil into marsh and mud.

### HAZARDS and RESTRICTIONS:

Aircraft beware of high power wires. Vessels be aware that Belmont Slough is very narrow and unmarked and mudflats and margins are very shallow.

### SITE STRATEGIES

Shore Margins along entire site and the channel are extremely shallow. Channel itself is probably navigable at low water, but nearshore activities are not feasible.

#### Strategy 2-362.1 Objective: Exclude/collection oil fom entering Belmont Slough.

- a) Deploy several 600 to 1,000+ ft. sections of 9X9+ Hboom cascading south along the mudflat/channel shelf contour to deflect oil back into main current and away from shore.
- b) Deploy 200 ft. of swamp boom from prominent rip rapped point NW of Belmont Slough entrance marsh across mudflat to channel margin. Exclude and deflect oil away from the marsh into a skimming pocket located in the main channel near the confluence of Belmont and Bay Sloughs. Light oil may be engaged using oil snare but heavier oil will require skimming per strategy 2-362.3.

#### Strategy 2-362.2 Objective: Protective booming of bayfront tidal marsh

Deploy 6,000 ft. of 9X9+ Hboom on the bay side of salt marsh island in front of Bay Slough. At the north end connect with boom leg of skimmer system. Tidal barrier boom is preferred, however, 9X9+ Hboom backed with several layers of sorbent boom may also be adequate.

#### Strategy 2-362.3 Objective: For Collectible oil quantities oil use SPS skimmer

Oil threat to the site via the channel and carried on tidal currents can only be addressed midchannel; shallow water Self Propelled Skimmer (SPS) or Stationary Floating Skimmer (SFS) can function in the collection pocket of initial deployment 2-362.1 to capture collectible oil.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-362.1	4000	200			18 18/40/ Danforht	3	0			14	
2-362.2	6000				35 35/22+/Danforth	2	3			16	
2-362.3	0	0	0	0	0	0	0	1 SPS	0		

### LOGISTICS

#### **DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Primary access is via water since land access is limited by fronting marsh. By land, exit Hwy 101 at East Hillsdale Blvd and proceed on Hillsdale or Foster City Blvd. bayward to Beach Park Blvd. This site includes the length of Belmont Slough and branching sloughs (Bay Slough) and the saltmarsh and mudflat frontage at the Bay front.

**LAND ACCESS:** All types along Beach Park Blvd.

**WATER LOGISTICS:** Extreme shallows and mudflats at low tide.

Limitations: depth, obstruction

Launching, Loading, Docking Redwood City Marina.

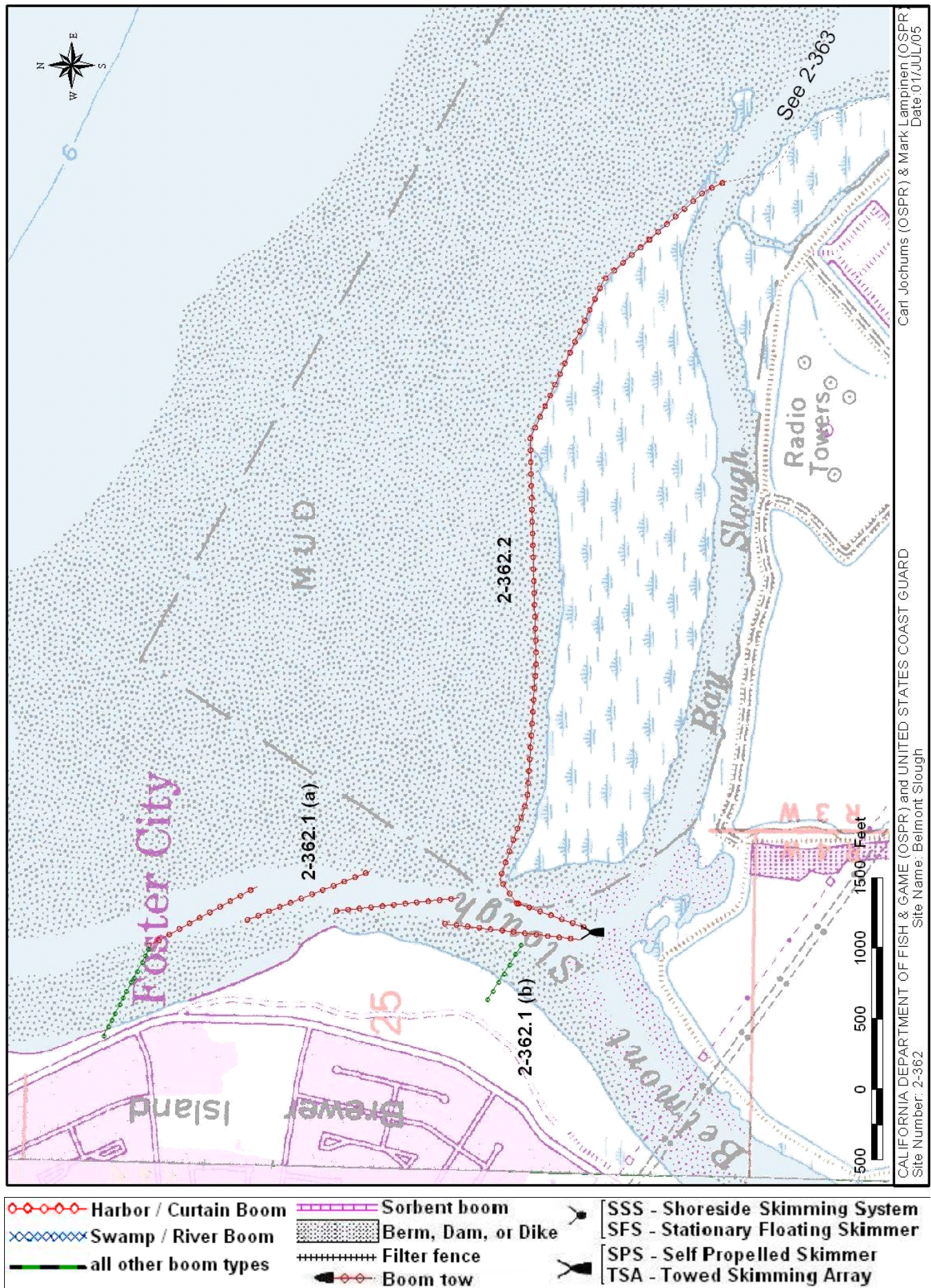
and Services Available:

#### **FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:**

Staging at Redwood City Marina, harbor and possibly along Beach Park Blvd. on Brewer Island in Foster City.

#### **COMMUNICATIONS PROBLEMS:**

#### **ADDITIONAL OPERATIONAL COMMENTS:**



County: **San Mateo**  
USGS Quad: **Redwood Point, California**

Thomas Guide Location

Latitude N  
3 7 32

Longitude W  
122 14

NOAA Chart: **18649/18650 Entrance to SF Bay**

Last Page Update : 1/15/2007

**SITE DESCRIPTION:**

This site extends from the mouth of Bay Slough to Bair Island and includes the marshes landward along Steinberger Slough and Smith Slough to Hwy 101. Steinberger Slough is on the southwest shore of South San Francisco Bay, two miles south of the San Mateo-Hayward Bridge. It lies to the northwest of Bair Island. This slough has no defined channel and is shallow. It has a well developed marsh and mudflat at the mouth and along its banks. It is part of San Francisco National Wildlife Refuge and California Department of Fish and Game Bair Island and Redwood Shores Ecological Reserve.

**SEASONAL and SPECIAL RESOURCE CONCERN**

"A" priority all year. Endangered species are present all year.

**RESOURCES OF PRIMARY CONCERN**

This site has extensive marshes and mudflats at the mouth and along its length.

Sensitive bird species found here include: Endangered - California clapper rail, California least tern; Threatened - western snowy plover; California Species of Special Concern: saltmarsh common yellowthroat, Alameda song sparrow. Also, California brown pelican, peregrine falcon, and large numbers of a wide variety of birds nest and winter here: shorebirds, waterfowl, wading birds, and waterbirds.

Sensitive mammals species found here include: salt marsh harvest mouse and salt marsh wandering shrew.

The sloughs and mudflats are important habitat for fish, shellfish and infauna.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
O	office San Mateo County Planning	San Mateo, County of, Planning and Building	(650) 363-4849

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-363 -A Site Strategy - Steinberger Slough

County and Thomas Guide Location

San Mateo

NOAA CHART

18649/18650 Entrance to SF Bay

## 2-363 -A

Latitude N

Longitude W

3 7 32

122 14

Last Page Update : 1/15/2007

### CONCERNS and ADVICE to RESPONDERS:

The concern is oil and response impacts to marsh, wildlife, and rare and endangered birds, animals and plants which are present year-round. Primary objective is to minimize exposure by excluding oil from entering Steinberger Slough. Secondary objective is to minimize exposure and impacts to bay frontage marshes by protective booming. Always of concern is the impacts resulting from response and cleanup: avoid trampling marsh and sensitive plants and animals, avoid disturbing soft mudflats, and avoid trampling oil into marsh and mud.

### HAZARDS and RESTRICTIONS:

Aircraft beware of overhead power lines nearby; vessels be aware of shallow water; channel not clearly marked.

### SITE STRATEGIES

Shore Margins along entire site and the channel are extremely shallow. Channel itself is probably navigable at low water, but nearshore activities are not feasible.

#### Strategy 2-363.1 Objective: Exclude/collect oil from entering Steinberger Slough

- a) Deploy 3,500 ft of 9X9+ Hboom along the north side channel margin to divert oil to a collection pocket positioned in the main slough channel. [Connect this boom to exclusion boom deployed as part of the Belmont Slough strategy (2-362.2) to exclude oil from Bay Slough and the marsh NW of Steinberger Slough mouth.]
- b) Use a portion of original 3,500 ft of 9X9+ Hboom deployed for legs of skimming pocket in mid channel. Use oil snare / sorbents to collect light oil or sheen, but implement skimming per 2-363.2 for skimmable oil.
- c) Place swamp boom across mudflats on both sides of main channel. Connect to Hboom.

#### Strategy 2-363.2 Objective: For Collectible oil quantities, use SPS skimmer

Position self propelled skimmer (SPS) or stationary floating skimmer (SFS) in main slough channel. Use a portion of original 3,500 ft of boom deployed for legs of skimming pocket. Connect southern leg to levee or extend out to remnant concrete pier on small island on the south side of main channel.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment and kinds	staff deploy	Staff tend
2-363.1	3500	500	50 OS	50	16 16/22+/danforth & chain	2	1		Bboat: very shallow draft	13	
2-363.2	0	0	0	0	0	0	0	1 SPS/SFS 0			

### LOGISTICS

#### DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Nearest vehicle access is San Carlos Airport: exit Hwy 101 at Holly/Redwood Shores Pkwy. This site extends from the mouth of Bay Slough to Bair Island and includes the marshes landward along Steinberger Slough and Smith Slough to Hwy 101.

**LAND ACCESS:** No road access to Bair Island.

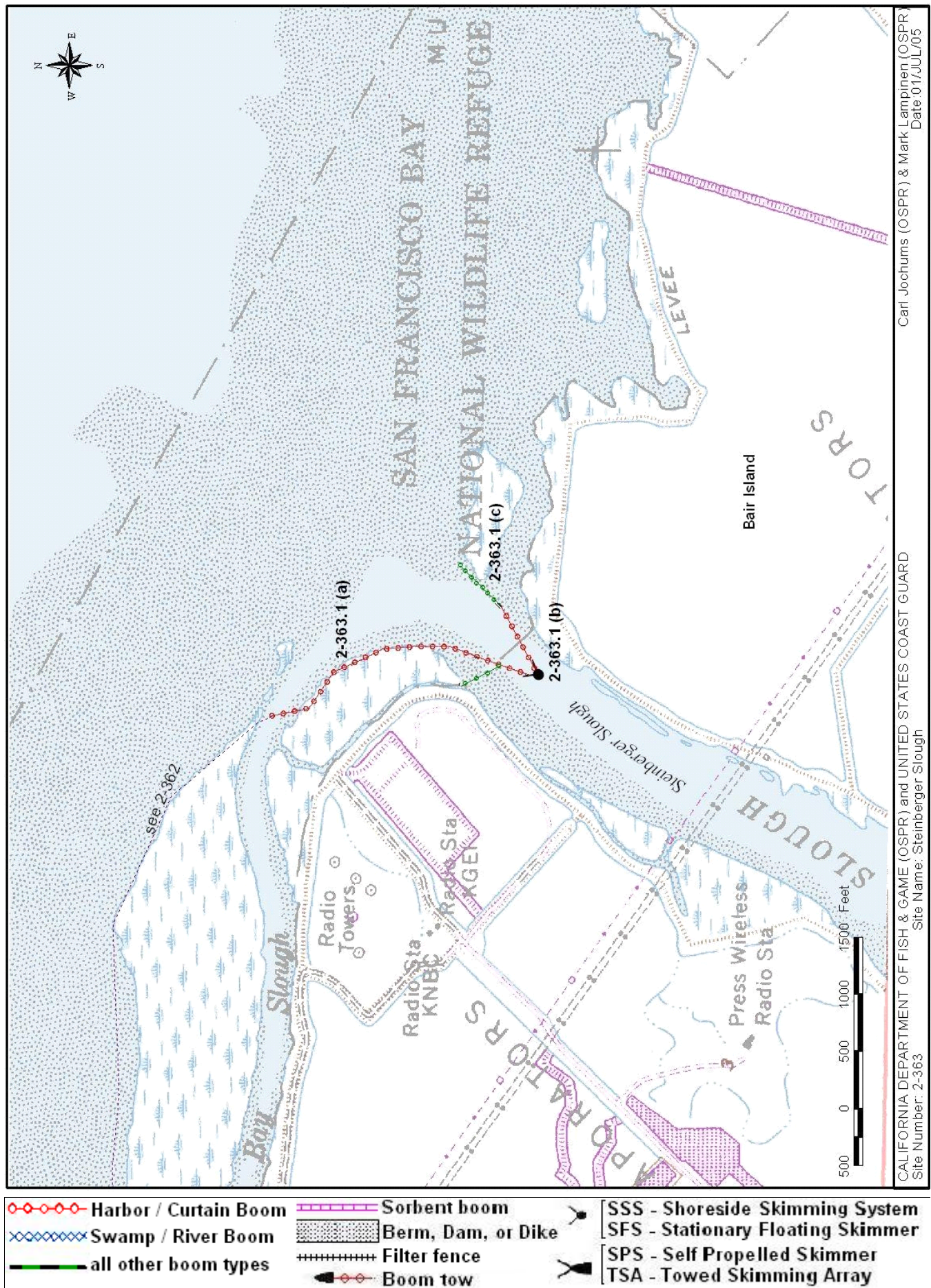
**WATER LOGISTICS:** No defined channel, impassable at low tide, very shallow.  
Limitations: depth, obstruction  
Launching, Loading, Docking and Services Available: Nearest launch is at Redwood City.

#### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at Port of Redwood City, possibly through sewage facility on north side of channel.

#### COMMUNICATIONS PROBLEMS:

#### ADDITIONAL OPERATIONAL COMMENTS:



County: **San Mateo**  
 USGS Quad: **Redwood Point, California**

Thomas Guide Location

Latitude N

Longitude W

3 7 32

122 14

NOAA Chart: **18649/18650 Entrance to SF Bay**

Last Page Update : 10/1/2002

**SITE DESCRIPTION:**

The site includes all of Bair Island between the mouths of Redwood Creek and Steinberger Slough. The "island" is located on the southwest shore of South San Francisco Bay, three miles south of the San Mateo-Hayward Bridge. Bair Island has an extensive marsh complex inside its levees. Water flows through breaches in several places around the island. A large fringe marsh exists outside the levee along Redwood Creek. It is bounded on the southeast by Redwood Creek, on the northwest by Steinberger Slough and on the south by Corkscrew Slough. It is part of San Francisco Bay National Wildlife Refuge and California Department of Fish and Game Bair Island Ecological Reserve.

**SEASONAL and SPECIAL RESOURCE CONCERN**

"A" priority all year. Endangered species are present all year. The greatest risk to harbor seals is during spring breeding season 15 March - 10 June: pups can ingest oil on female's fur during nursing; disturbance during brief lactation period (3-5 weeks) can reduce pup's survival after weaning. Moderate risk year-round from inhalation of volatile oil fractions and ingestion of contaminated prey.

**RESOURCES OF PRIMARY CONCERN**

This site has an extensive marsh complex inside its levees. Water flows through breaches in several places around the island. A large fringe marsh exists outside the levee along Redwood Creek and outer levees and islands. The bay frontage has an extensive tidal mudflat.

Sensitive bird species found here include: Endangered - California clapper rail, , California least tern; Threatened - western snowy plover; California Species of Special Concern: saltmarsh common yellowthroat, Alameda song sparrow. Also, California brown pelican, American peregrine falcon and large numbers of a wide variety of birds nest and winter here: shorebirds, waterfowl, wading birds, and waterbirds.

Sensitive mammals species found here include: endangered salt marsh harvest mouse and California species of special concern salt marsh wandering shrew. Harbor seals haul out along north side of creek. This is the largest harbor seal rookery in San Francisco Bay. Seal numbers during spring/breeding season have reached 350 adults + 100 pups, nonbreeding 5 - 70 seals.

The sloughs and mudflats are important habitat for fish, shellfish and infauna.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-364 -A Site Strategy - Bair Island

County and Thomas Guide Location

San Mateo

NOAA CHART

18649/18650 Entrance to SF Bay

## 2-364 -A

Latitude N

3 7 32

Longitude W

122 14

Last Page Update : 1/15/2007

### CONCERNS and ADVICE to RESPONDERS:

The concern is oil and response impacts to marsh, wildlife, and rare and endangered birds, animals and plants which are present year-round. Primary objective is to minimize exposure by excluding oil from entering openings to Bair Island and adjacent sensitive sites. Secondary objective is to minimize exposure and impacts to bay frontage marshes by protective booming. Always of concern is the impacts resulting from response and cleanup: avoid trampling marsh and sensitive plants and animals, avoid disturbing soft mudflats, and avoid trampling oil into marsh and mud.

### HAZARDS and RESTRICTIONS:

Aircraft beware of overhead power lines nearby. Vessels be aware of shallow water.

### SITE STRATEGIES

Strategy 2-364.1 Objective: Exclude oil from entering Bair Island: close openings to interior.

a) Several breaches in the levee around Bair Island exist. These channel entrances lead to an extensive marsh complex inside Bair Island. It is critical that these channel entrances be blocked. Approximately 200 ft of curtain boom, swamp boom, sorbent boom, or a combination thereof may be deployed.

b) A large levee breach exists approximately halfway between Steinberger Slough and Redwood Creek. This channel entrance should be blocked using any methods or equipment possible.

Strategy 2-364.2 Objective: Protective booming of exposed marsh frontage.

Deploy 4,000 ft of exclusionary tidal barrier boom around unleveed marsh on eastern Bair Island, northwest of Redwood Creek, beginning near levee breach midway along the bay side shore. Extend boom east and south into Redwood Creek channel. Connect with Hboom from Redwood Creek strategy (2-365-A).

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment and kinds	staff deploy	Staff tend
2-364.1	0	200		200	3 3/22+/danforth c chain	1	1		very shallow Bboat	5	
2-364.2	0		4000 TBB		17 17/22+/danforth c chain & line	2	1		Very shallow water Bboat		

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Bair Island has no vehicular access. By water it is at the mouth and to the north of Redwood Creek, just bayward of the Port of Redwood City. The site includes all of Bair Island between the mouths of Redwood Creek and Steinberger Slough. The "island" is located on the southwest shore of South San Francisco Bay, three miles south of the San Mateo-Hayward Bridge.

**LAND ACCESS:** Foot: no road access to Bair Island.

**WATER LOGISTICS:** Very shallow on bay frontage and at margins.

Limitations: depth, obstruction

Launching, Loading, Docking Port of Redwood City.

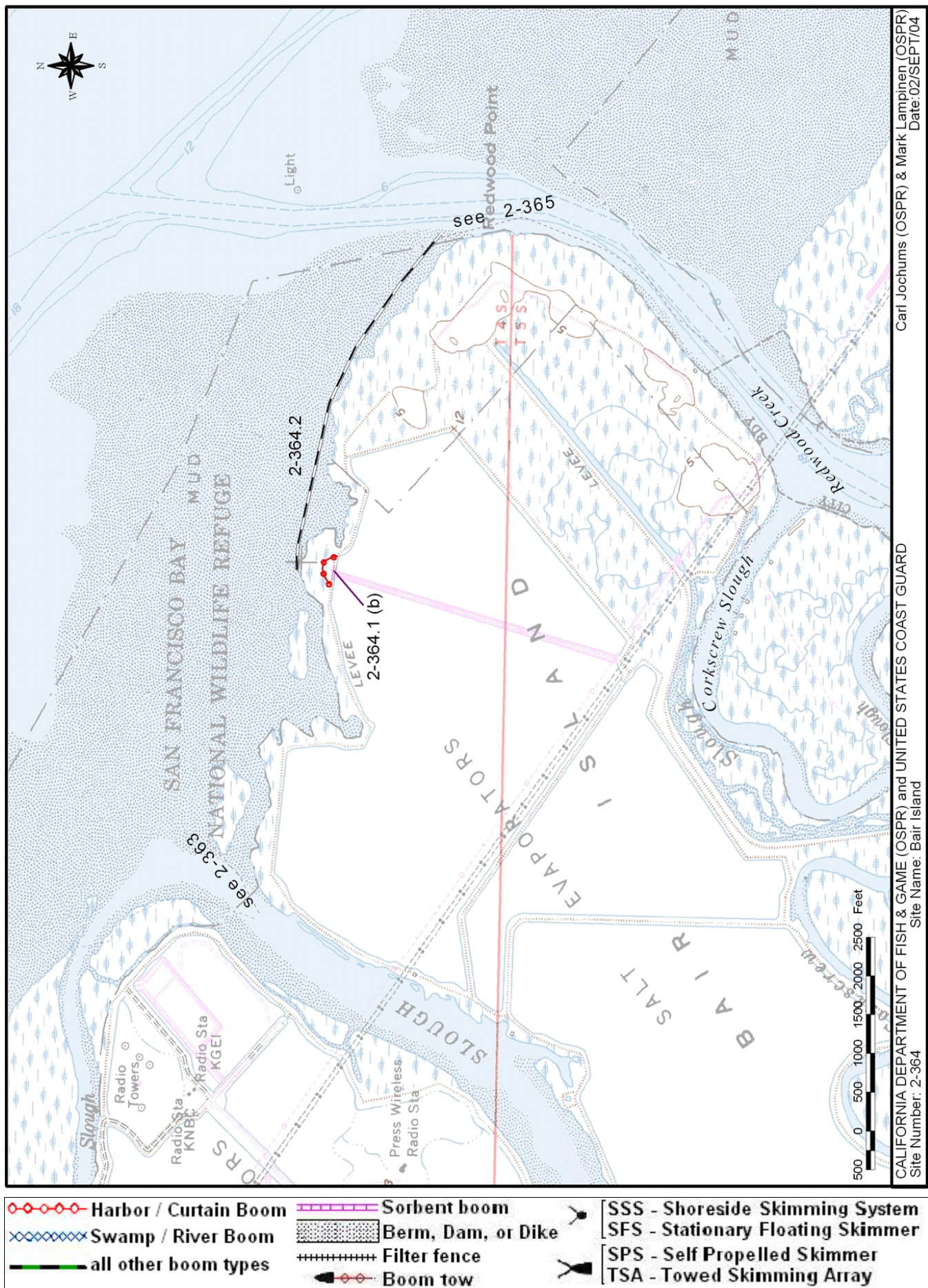
and Services Available:

**FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:**

Staging at Port of Redwood City.

**COMMUNICATIONS PROBLEMS:**

**ADDITIONAL OPERATIONAL COMMENTS:**



County: **San Mateo**

Thomas Guide Location

Latitude N

Longitude W

USGS Quad: **Redwood Point, California**

3 7 32

122 14

NOAA Chart: **18649/18650 Entrance to SF Bay**

Last Page Update : 1/15/2007

**SITE DESCRIPTION:**

The site includes Redwood Creek from its mouth to Hwy 101 and Westpoint Slough, and several small side channels (but not Corkscrew Slough). Redwood Creek is the dredged channel for the Port of Redwood City. Its banks are lined with cordgrass and pickleweed marshes. Large tidal flows through this creek feed other connecting sloughs and marshes. Portions of the mouth are included in San Francisco National Bay Wildlife Refuge.

**SEASONAL and SPECIAL RESOURCE CONCERN**

"A" priority all year. Endangered species are present all year.

**RESOURCES OF PRIMARY CONCERN**

The banks of Redwood Creek, West Point Slough and other channels are lined with cordgrass and pickleweed marshes. Large tidal flows through this creek feed other connecting sloughs and marshes. These marshes and associated mudflats support a wide variety of species including many Special Status Species.

Sensitive bird species found here include: Endangered - California clapper rail, , California least tern; Threatened - western snowy plover; California Species of Special Concern: saltmarsh common yellowthroat, Alameda song sparrow. Also, California brown pelican, American peregrine falcon and large numbers of a wide variety of birds nest and winter here: shorebirds, waterfowl, wading birds, and waterbirds.

Sensitive mammals species found here include: endangered salt marsh harvest mouse and California species of special concern - salt marsh wandering shrew. Harbor seals haul out along north side of creek.

The sloughs and mudflats are important habitat for fish, shellfish and infauna.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-365 -A Site Strategy - Redwood Creek

County and Thomas Guide Location

San Mateo

NOAA CHART

18649/18650 Entrance to SF Bay

## 2-365 -A

Latitude N

3 7 32

Longitude W

122 14

Last Page Update : 1/15/2007

### CONCERNS and ADVICE to RESPONDERS:

The concern is oil and response impacts to marsh, wildlife, and rare and endangered birds, animals and plants which are present year-round. Primary objective is to minimize exposure by excluding oil from entering Redwood Creek. Secondary objective is to minimize exposure and impacts to bay frontage marshes by protective booming. Always of concern is the impacts resulting from response and cleanup: avoid trampling marsh and sensitive plants and animals, avoid disturbing soft mudflats, and avoid trampling oil into marsh and mud.

### HAZARDS and RESTRICTIONS:

Aircraft beware of overhead power lines nearby. Vessels be aware of shallow water.

### SITE STRATEGIES

Shore margins along entire site and the channel are extremely shallow. Channel itself is navigable, but nearshore activities are not feasible.

Strategy 2-365.1 Objective: Deflect past, Deflect to collection, Protective boom shoreline.

- a) Deploy several 600+ ft sections (3000 ft) of 9X9+ Hboom with heavy anchors from Redwood Creek channel markers #3,4,5, and 6 to deflect oil back into main current and away from shore.
- b) Deploy 1,500 ft of 18 inch deflection swamp boom off both channel markers #7 and 8.
- c) Deploy 5,000 ft of 18 inch swamp boom along the north channel margin and on the south side of the channel, connect with boom deployed in the Bair Island strategy (2-364.2). Exclude and deflect oil away from the marsh into a skimming pocket located in the main channel near channel markers #9 and 10: use oil snare / sorbents to collect light oil or sheen, but implement skimming per 2-365.2 for skimmable oil.

Strategy 2-365.2 Objective: For Collectible oil quantities, use SPS skimmer

Position self propelled skimmer (SPS) or stationary floating skimmer (SFS) in main slough channel in or attached to the skimming pocket deployed in 2-365.1. Skimmer system may need be set up so that it can rearranged for flood and ebb tides.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	type and gear	Boom boat	Skiffs punts	Skimmers No	Type	Special Equipment or comment and kinds	staff deploy	Staff tend
2-365.1	3000	8000		2000	50	35/22+ & 15/40+ danforth w chain	6	3			very shallow Bboats	28	
2-365.2	0	0	0	0	0		0	0	1 SPS/SFS	0			

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Vehicle access to margin of site is from Hwy 101, exit on Seaport Blvd and continue to Port of Redwood City or Municipal Marina. Vessel access is from the Port or marina bayward to the mouth of Redwood Creek. The site includes Redwood Creek from its mouth to Hwy 101 and Westpoint Slough, and several small side channels (but not Corkscrew Slough).

**LAND ACCESS:** Foot only except at harbors.

**WATER LOGISTICS:** Extreme shallows near shore.

Limitations: depth, obstruction

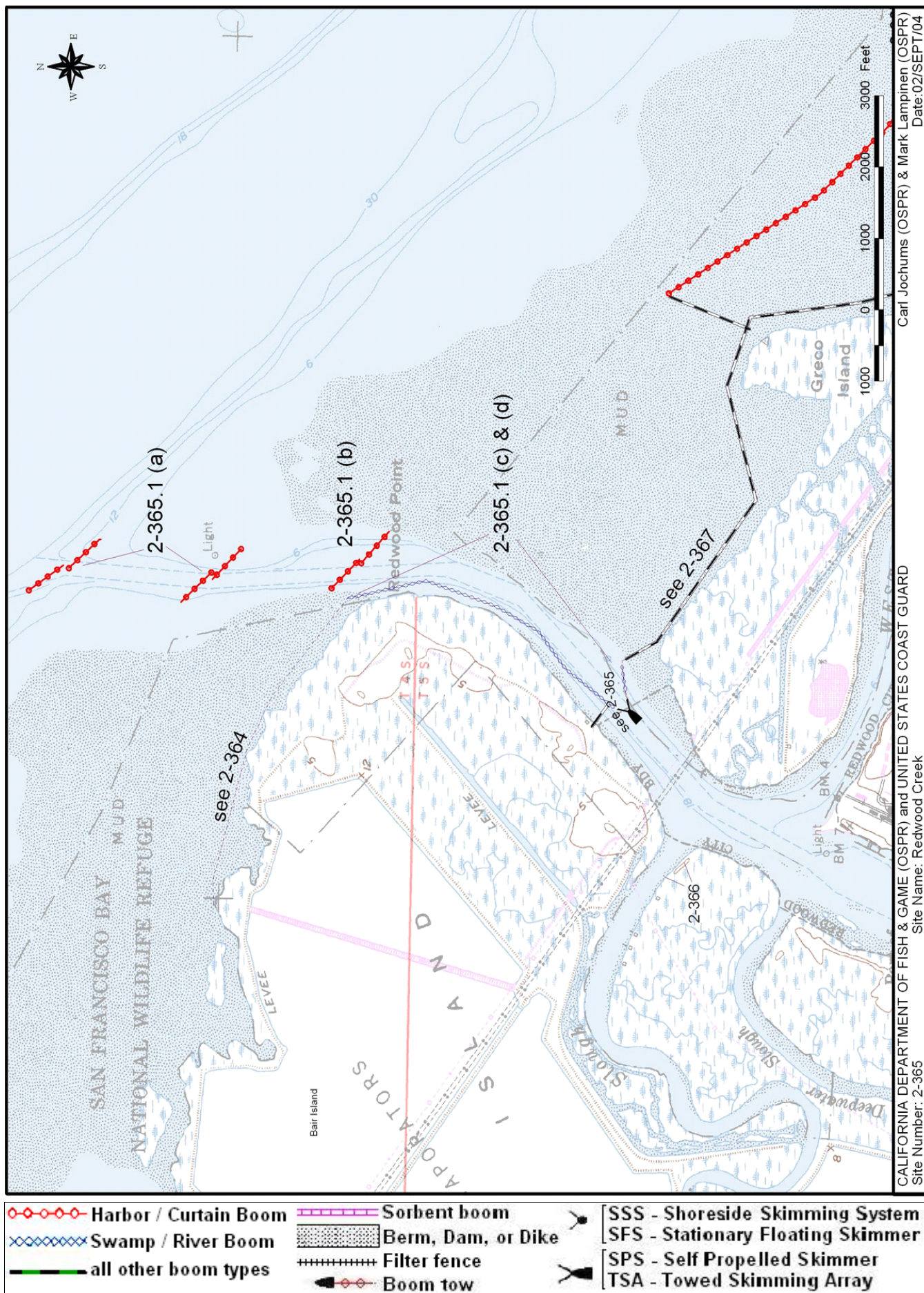
Launching, Loading, Docking and Services Available: On site: Redwood City Marina and Port of Redwood City.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at Redwood City marina, harbor.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



County: **San Mateo**  
 USGS Quad: **Redwood Point, California**

Thomas Guide Location

Latitude N

Longitude W

3 7 31

122 14

NOAA Chart: **18649/18650 Entrance to SF Bay**

Last Page Update : 10/1/2002

**SITE DESCRIPTION:**

Corkscrew Slough lies to the south of Bair Island and extends from Redwood Creek on the east to Steinberger Slough on the west. Corkscrew Slough is a water channel on the southwest shore of South San Francisco Bay, three miles south of the San Mateo-Hayward Bridge, on the back side of Bair Island. Primary water flow comes from Redwood Creek. Its banks are lined with cordgrass and pickleweed marsh. The easterly half of the slough is included in the San Francisco Bay National Wildlife Refuge.

**SEASONAL and SPECIAL RESOURCE CONCERN**

"A" priority all year. Endangered species are present all year. The greatest risk to harbor seals is during spring breeding season 15 March - 10 June: pups can ingest oil on female's fur during nursing; disturbance during brief lactation period (3-5 weeks) can reduce pup's survival after weaning. Moderate risk year-round from inhalation of volatile oil fractions and ingestion of contaminated prey.

**RESOURCES OF PRIMARY CONCERN**

Margins of the slough are cordgrass and pickleweed with fronting tidal mudflats.

Sensitive bird species found here include: Endangered - California clapper rail, California least tern; Threatened - western snowy plover; California Species of Special Concern: saltmarsh common yellowthroat, Alameda song sparrow. Also, California brown pelican, American peregrine falcon and large numbers of a wide variety of birds nest and winter here: shorebirds, waterfowl, wading birds, and waterbirds.

Sensitive mammals species found here include: endangered salt marsh harvest mouse and California species of special concern - salt marsh wandering shrew. This is an important harbor seal pupping and haulout area.

The sloughs and mudflats are important habitat for fish, shellfish and infauna.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-366 -A Site Strategy - Corkscrew Slough

County and Thomas Guide Location

San Mateo

NOAA CHART

18649/18650 Entrance to SF Bay

## 2-366 -A

Latitude N

Longitude W

3 7 31

122 14

Last Page Update :

### CONCERNS and ADVICE to RESPONDERS:

The concern is oil and response impacts to marsh, wildlife, including seal pupping, and rare and endangered birds, animals and plants which are present year-round. Primary objective is to minimize exposure by excluding oil from entering Corkscrew Slough. Always of concern is the impacts resulting from response and cleanup: avoid trampling marsh and sensitive plants and animals, avoid disturbing soft mudflats, and avoid trampling oil into marsh and mud.

### HAZARDS and RESTRICTIONS:

Aircraft beware of overhead power lines nearby. Vessels be aware of shallow water and strong currents.

### SITE STRATEGIES

Strategy 2-366.1 Objective: Exclude oil from entering Corkscrew Slough. Corkscrew Slough is an interior Slough between Steinberger Slough and Redwood Creek

- a) Protect from spills coming from the Bay by implementing Redwood Creek (2-365) and Steinberger Slough (2-363) strategies. The main flow of water into Corkscrew Slough is through Redwood Creek.
- b) Protection from spills in Redwood Creek (Port of Redwood City): Deploy 1200 ft of 9x9+ Hboom in a chevron, with a J hook on the deeper south side for collection, outside Slough mouth. Current swift inside mouth.
- c) Deploy 800 ft sorbent boom and/or hard boom inside the slough.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	15 / 22+ / Danforth w chain & stakes	Boom boat	Skiffs punts	Skimmers No	Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-366.1	1200			800	15	15 / 22+ / Danforth w chain & stakes	2	0			very shallow Bboats	5	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

This site is accessible from water only, just bayward and across creek from Port of Redwood City. Nearest land access is Port and marina: Exit Hwy 101 on Seaport Blvd and proceed bayward to marina and Port. Corkscrew Slough lies to the south of Bair Island and extends from Redwood Creek on the east to Steinberger Slough on the west.

**LAND ACCESS:** Foot only, vehicles at harbor nearby.

**WATER LOGISTICS:** Very shallow near shore.

Limitations: depth, obstruction

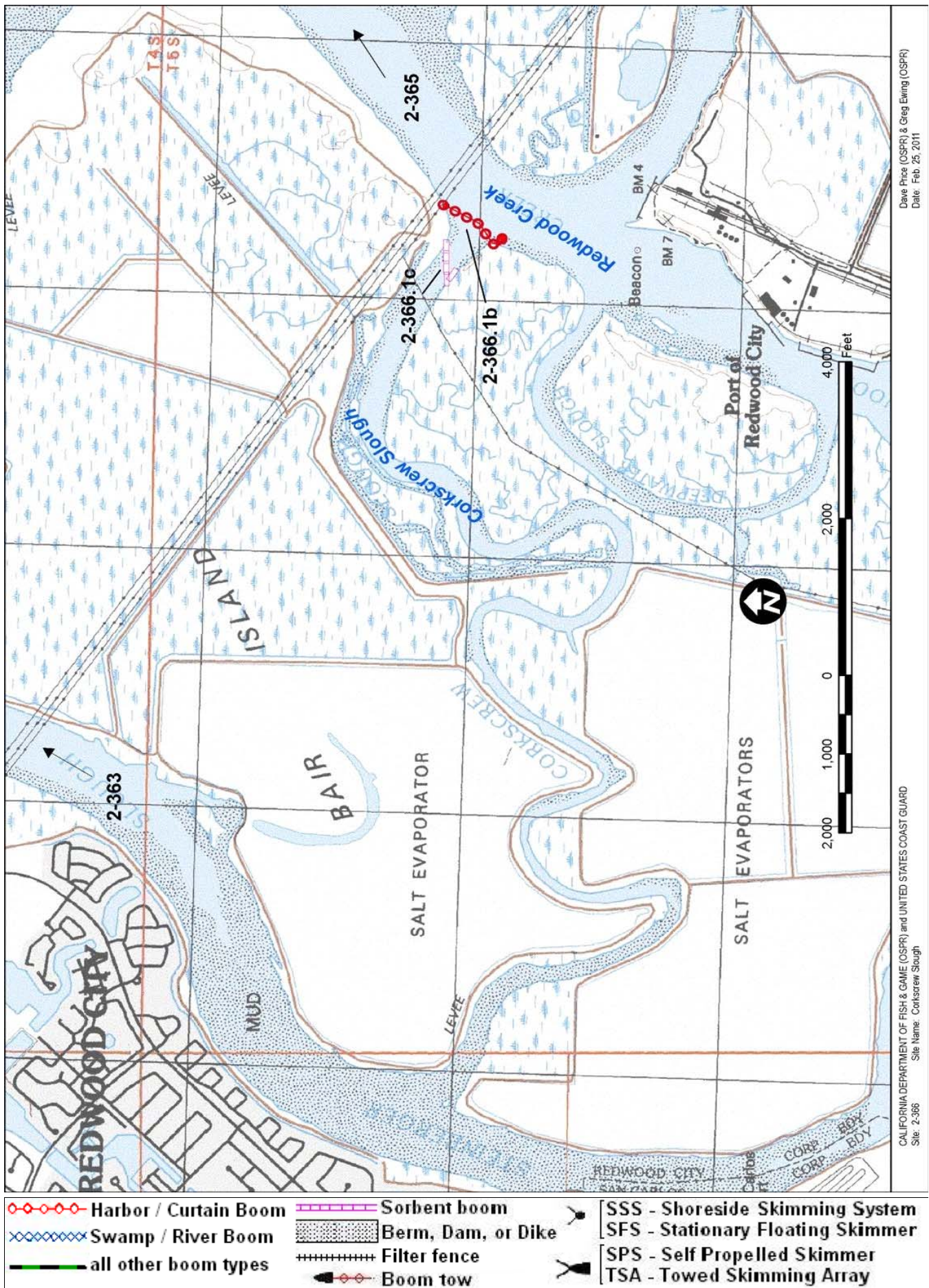
Launching, Loading, Docking Port of Redwood City and marina.  
and Services Available:

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at Port of Redwood City. No road access to Bair Island.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



County: **San Mateo**

Thomas Guide Location

Latitude N

Longitude W

USGS Quad: **Redwood Point, California**

3 7 31

122 12

NOAA Chart: **18649/18650 Entrance to SF Bay**

Last Page Update : 1/15/2007

**SITE DESCRIPTION:**

This site extends from the mouth of Redwood Creek to the Dumbarton Bridge and includes Greco Island, Ravenswood Slough and the marsh between the slough and Ravenswood Point. This site is part of US FWS SF Bay NWR. Greco Island is a saltmarsh island on the southwest shore of South San Francisco Bay, one mile northwest of the Dumbarton Bridge. It is bounded on the northwest by Redwood Creek and on the southwest by Westpoint Slough. Ravenswood Slough opens to the Bay south of Greco Island near Westpoint Slough. Fringing cordgrass/pickleweed marshes line the mouth and banks. The Greco Island site was combined with formerly designated Ravenswood Slough site due to their close proximity to each other, similar sensitivities, and combined response protection strategy.

**SEASONAL and SPECIAL RESOURCE CONCERN**

"A" priority all year. Endangered species are present all year. The greatest risk to harbor seals is during spring breeding season 15 March - 10 June: pups can ingest oil on female's fur during nursing; disturbance during brief lactation period (3-5 weeks) can reduce pup's survival after weaning. Moderate risk year-round from inhalation of volatile oil fractions and ingestion of contaminated prey.

**RESOURCES OF PRIMARY CONCERN**

Habitats at risk include the pickleweed and cordgrass marshes of the islands and slough margins, high marsh suitable for seal rookery and haulout, and extensive mudflats, particularly on bayward margins.

Sensitive bird species found here include: Endangered - California clapper rail, California brown pelican, peregrine falcon, California least tern; California Species of Special Concern: saltmarsh common yellowthroat, Alameda song sparrow. Also, large numbers of a wide variety of birds nest and winter here: shorebirds, waterfowl, wading birds, and waterbirds.

Sensitive mammals species found here include: salt marsh harvest mouse and salt marsh wandering shrew. Greco Island is a harbor seal haulout and rookery site. Seal number - Spring/breeding 25-60 adults + pups; nonbreeding 5-25 adults.

The sloughs and mudflats are important habitat for fish, shellfish and infauna.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880), for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E/T	Marge Kolar SF NWR Complex Mgr	USFWS - SF	(510) 792-0222
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-367 -A Site Strategy - Greco Island/Ravenswood Slough

County and Thomas Guide Location

San Mateo

NOAA CHART

18649/18650 Entrance to SF Bay

## 2-367 -A

Latitude N

Longitude W

3 7 31

122 12

Last Page Update : 1/15/2007

### CONCERNS and ADVICE to RESPONDERS:

The concern is oil and response impacts to marsh, wildlife, including seal pups and adults, and rare and endangered birds, animals and plants which are present year-round. Primary objective is to minimize exposure by excluding oil from entering Ravenswood Slough, Westpoint Slough and small tidal sloughs. Secondary objective is to minimize exposure and impacts to bay frontage marshes by protective booming. Always of concern is the impacts resulting from response and cleanup: avoid trampling marsh and sensitive plants and animals, avoid disturbing soft mudflats, and avoid trampling oil into marsh and mud.

### HAZARDS and RESTRICTIONS:

Aircraft beware of overhead power lines nearby. Vessels be aware of shallow water.

### SITE STRATEGIES

Protection of this site requires the use of deflection booming off the Redwood Creek channel markers as described in the Redwood Creek strategy (A-2-365). Since site is part of USFWS NWR, activity at this site should be coordinated with refuge personnel (510)792-0222.

#### Strategy 2-367.1 Objective: exclude oil from entering main sloughs and outer margin bay approach booming.

- At entrances to Ravenswood and Westpoint Sloughs, deploy chevron exclusions using swamp boom. (about 1200' total).
- Additionally, deploy 8,000 ft of 9X9+ Hboom with 2,000 ft of swamp boom (or intertidal barrier boom) for shore connections, along the outer edge of the mudflat from the prominent point by side of Greco Island south to the point on the levee between Ravenswood Point and Ravenswood Slough.
- Coordinate with SF Bay National Wildlife Refuge staff to insure closure of tidal gates, pumps, syphons, and other water structures admitting water (and oil) to wetlands behind levees.

#### Strategy 2-367.2 Objective: Exclusion/protection of bay marsh front of Greco and Ravenswood Isls.

Deploy 10,000 ft of exclusionary tidal barrier boom or swamp boom across the upper portion of the mudflat fronting the marsh of Greco Island and connect boom at the north end with Redwood Creek strategy.

ALTERNATIVES: It is critical that channel entrances leading into Greco Island be blocked. If tidal barrier boom should fail or time to impact does not permit its deployment. Block channel mouths with curtain boom, swamp boom, sorbent boom, or combination thereof.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	type and gear	Boom boat	Skiffs punts	Skimmers No	Type	Special Equipment or comment and kinds	staff deploy	Staff tend
2-367.1	8000	2000		2000	60	60/22+ danforths & stakes	6	10	0		very shallow Bboats	40	
2-367.2	0	0	10000 TBB	0	50	stakes	6	2	0	20			

### LOGISTICS

#### DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

There is no vehicle access to this site. Nearest vehicle access is Port of Redwood City: Exit Hwy 101 at Seaport Blvd. and continue bayward to Port or marina. Water access is from Port or Marina immediately to the south from Redwood Creek. This site extends from the mouth of Redwood Creek to the Dumbarton Bridge and includes Greco Island, Ravenswood Slough and the marsh between the slough and Ravenswood Point. This site is part of US FWS SF Bay NWR.

**LAND ACCESS:** No road access.

**WATER LOGISTICS:** Very shallow mudflats.

Limitations: depth, obstruction

Launching, Loading, Docking Redwood City marina and Port.

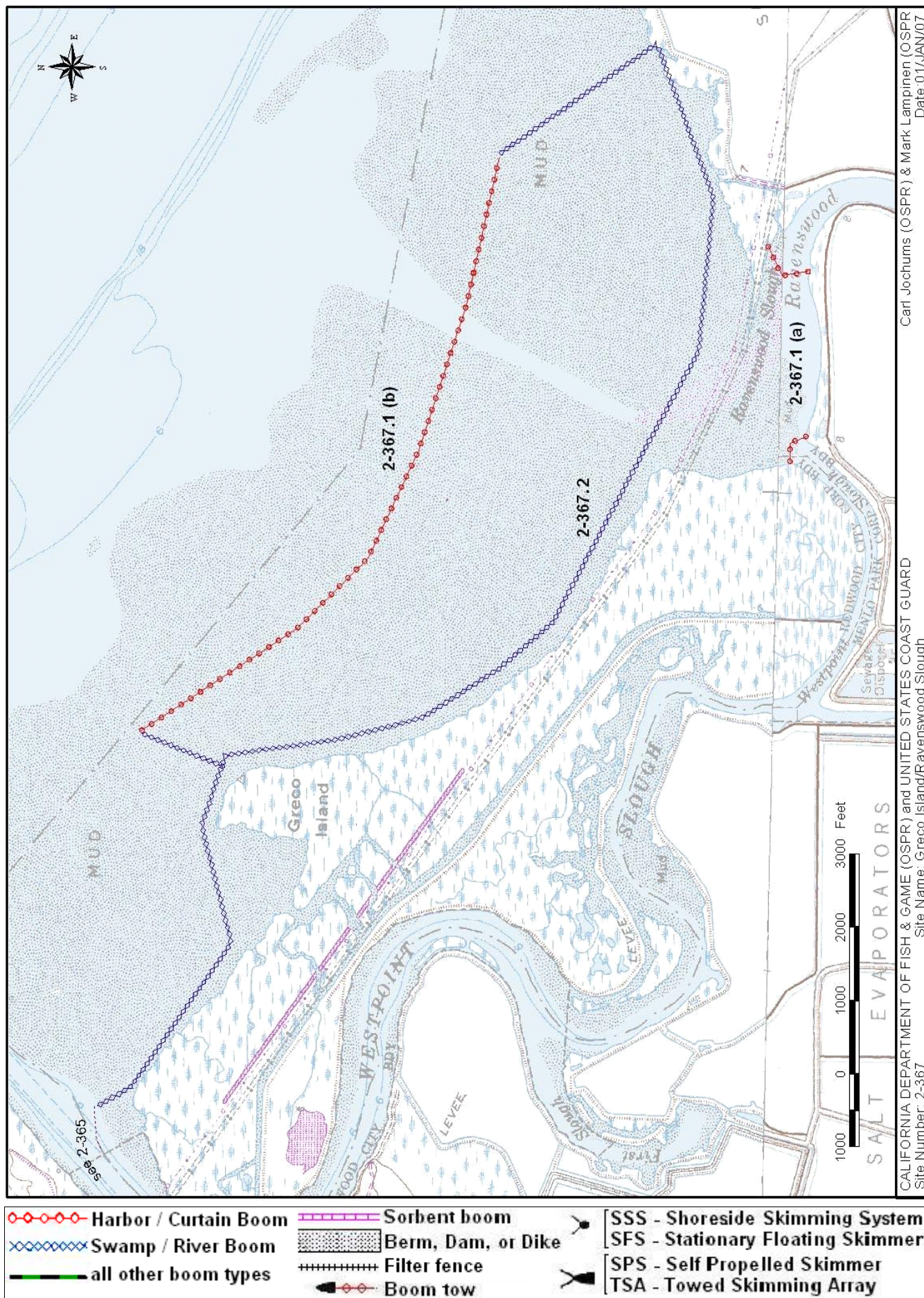
and Services Available:

#### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at Redwood City marina, harbor.

#### COMMUNICATIONS PROBLEMS:

#### ADDITIONAL OPERATIONAL COMMENTS:



County: **Santa Clara**  
 USGS Quad: **Mountain View**

Thomas Guide Location

Latitude N

Longitude W

3 7 28

122 06

NOAA Chart: **18654 San Francisco Bay Southern Part**

Last Page Update : 7/1/1996

**SITE DESCRIPTION:**

Palo Alto Marsh lies on the southwest shore of South San Francisco Bay, immediately south of the Dumbarton Bridge to Mayfield Slough. Cordgrass saltmarsh and mudflats are bisected by several channels, including San Francisquito Creek. The site is part of the City of Palo Alto's Baylands Nature Preserve. The site is fronted by extensive very shallow mudflats.

**SEASONAL and SPECIAL RESOURCE CONCERN**

"A" priority all year. Endangered species are present all year.

**RESOURCES OF PRIMARY CONCERN**

This is a saltmarsh habitat primarily composed of cordgrass and pickleweed and supports a rich variety of species including numerous T & E species.

Sensitive bird species found here include: Endangered - California clapper rail California least tern; Threatened - western snowy plover; California Species of Special Concern: saltmarsh common yellowthroat, Alameda song sparrow. Also, California brown pelican, American peregrine falcon, and significant numbers of a wide variety of birds nest and winter here: shorebirds, waterfowl, wading birds, and waterbirds.

Sensitive mammals species found here include: Endangered - salt marsh harvest mouse; California species of special concern - saltmarsh wandering shrew.

San Francisquito Creek supports the largest and one of the few remaining steelhead runs in San Francisco Bay.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

There are probably historic and cultural sites present. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
E		Baylands Nature Preserve	(650) 617-3156
T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
O	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
E	Pat Metelli	Cargill Salt	(510) 790-8610

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-370 -A Site Strategy - Palo Alto Marsh

County and Thomas Guide Location

Santa Clara

NOAA CHART

18654 San Francisco Bay Southern Part

## 2-370 -A

Latitude N

Longitude W

3 7 28

122 06

### CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

Primary concern is to exclude oil from entering the interior marsh via channels. Second concern is oiling of this low energy marsh front. Also of concern is damage to marsh from response activities: trampling marsh vegetation, disturbing sensitive species, and trampling of oil into sediments.

### HAZARDS and RESTRICTIONS:

Aircraft beware of airport traffic and overhead power lines nearby; vessels beware of shallow water; pilings and debris on mudflat.

### SITE STRATEGIES

Strategy 2-370.1 Objective: Exclude oil from entering the entrances to Palo Alto Marsh and San Francisquito Creek, if time to impact does not permit its deployment or if tidal barrier boom (strategy 2-370.2) should fail.

ALTERNATIVES: It is critical that channel entrances leading into Palo Alto Marsh (Baylands Nature Preserve) and San Francisquito Creek be blocked, and also, the small tidal inlets to the marsh north of Cooley Landing. Deploy 100' lengths of appropriate curtain boom and block channel mouths with curtain boom, swamp boom, sorbent boom, or combination thereof.

Strategy 2-370.2 Objective: Protective booming of marsh front to keep oil from impacting marsh and mudflats.

Deploy 9,000 - 10,000 ft of exclusionary 9X9+ Hboom across the mudflat from Cooley Landing around Sand Point to Mayfield Slough.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-370.1	500	500		500		1	3			9	
2-370.2	10000	1000		1000	60 50-60 / 22#+/danforths	6	3		shallow draft bombast	38	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Vehicle access is available at two points: Cooley Landing - from Hwy 84 or Hwy 101, exit on University Ave and then bayward on Bay Rd; Palo Alto Baylands Nature Preserve - from Hwy 101 exit on Embarcadero Rd and proceed bayward to terminus. Palo Alto Marsh lies on the southwest shore of South San Francisco Bay, immediately south of the Dumbarton Bridge to Mayfield Slough.

**LAND ACCESS:** All weather, all vehicle road to site

**WATER LOGISTICS:** Very shallow

Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Launch at Mayfield Slough and at Cooley Landing. Larger craft at Redwood City Marina or Harbor.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at Palo Alto Boat Works and Redwood City Marina or Harbor. Also, at public access at mouth of Mayfield Slough.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



County: **Santa Clara**  
USGS Quad: **Mountain View**

Thomas Guide Location

Latitude N      Longitude W  
37 27.0      122 05.0

NOAA Chart: **18654 San Francisco Bay Southern Part**

Last Page Update : 7/1/1996

**SITE DESCRIPTION:**

This site includes Mayfield and Charleston Sloughs, including the bay frontage adjacent and open to Charleston Slough, and all inland tributary marshes. These sloughs are on the southwest shore of South San Francisco Bay, four miles south of the Dumbarton Bridge. The old Palo Alto Yacht Harbor is located on Mayfield Slough. Both sloughs have fringing cordgrass and pickleweed marshes at their mouths and along their banks. These sloughs network over 200 acres of saltmarsh.

**SEASONAL and SPECIAL RESOURCE CONCERN**

"A" priority year-round. Saltmarsh and special status wildlife are present and vulnerable throughout the year.

**RESOURCES OF PRIMARY CONCERN**

This extensive marsh is cordgrass and pickleweed saltmarsh supporting endangered species throughout year.

Sensitive bird species found here include: endangered California clapper rail, California least tern, western snowy plover, An California species of special concern - saltmarsh common yellowthroat. Also, California brown pelican, American peregrine falcon and large numbers of a wide variety of birds nest and winter here: shorebirds, waterfowl, wading birds, and waterbirds.

Sensitive mammals species found here include: Endangered - salt marsh harvest mouse; California species of special concern - saltmarsh wandering shrew; and harbor seals haul out here.

The mudflats are important habitat for fish, shellfish, and infauna.

Predominant marsh species here are cordgrass and pickleweed.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

There are probably historic and cultural sites present. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
O		SF Bird Observatory	(408) 946-6548
T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E	Scott Miner	US Army Corps of Engineers	(415) 503-6573
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E	Butch Paredes	Cargill Salt	(510) 790-8165

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-372 -A Site Strategy - Charleston and Mayfield Sloughs

County and Thomas Guide Location

Santa Clara

NOAA CHART

18654 San Francisco Bay Southern Part

## 2-372 -A

Latitude N

Longitude W

37 27.0 122 05.0

### CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

Primary concern is that oil will enter Mayfield and Charleston sloughs, exposing extensive saltmarsh, mudflats, and wildlife to oil. Strategies are designed to exclude oil from being transported to inner marsh by deflecting to skimmers and by exclusion booming. Secondary concern is oiling of marsh front. Also of concern is damage to marshes and soft slough bottoms from response activity. Avoid trampling marsh and trampling oil into soft sediments.

### HAZARDS and RESTRICTIONS:

Aircraft beware of overhead powerlines nearby, and airport traffic in area. Vessels beware of shallow water and strong currents in area: channel is narrow and privately maintained.

### SITE STRATEGIES

Strategy 2-372.1 Objective: Deflect oil away from marshes to skimmers.

- Deploy 2000' of 9X9+ Hboom across entrance to Mayfield and Charleston Sloughs.
- Place skimmer in J-hook of boom on north side of channel near small boat dock.
- Deploy 500' of 9X9+ Hboom across the north entrance of Charleston Slough at the confluence of Mayfield Slough. Create a J-hook against levee and place skimmer or vac truck there.

Strategy 2-372.2 Objective: Exclude oil from entering Charleston Slough

Deploy 1200' of 18" or smaller curtain boom across southern entrance to Charleston Slough. Place boom along power line tower supports and foot bridge. Back with sorbent booms.

Strategy 2-372.3 Objective: Close all tide gates and salt pond intake structures to exclude oil from expanding to inner marshes and impoundments.

- Close large tide gates near confluence of sloughs and tide gate under road near Baylands Nature Preserve Interpretive Center (operated by City of Mountain View).
- Notify Cargill Salt Co. to close saltwater intake culverts (2x48") on east side of Charleston Slough.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-372.1	2500			500	7 7/25#/danforth	2	1	2 SSS	Shallow draft Bboats & skiffs	13	
2-372.2	0	1200		1200	5 5/25+/danforths	1	1				
2-372.3	0									2	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

From Hwy 101 in Palo Alto, exit east bound on Embarcadero, passt airport to Mayfield public access. Public access area and dock are at mouth of Mayfield Slough. Mountain View Parks Dept. has access roads to south side of Charleston Slough. Possible access at Palo Alto Boat Works. This site includes Mayfield and Charleston Sloughs, including the bay frontage adjacent and open to Charleston Slough, and all inland tributary marshes. These sloughs are on the southwest shore of South San Francisco Bay, four miles south of the Dumbarton Bridge. The old Palo Alto Yacht Harbor is located on Mayfield Slough.

**LAND ACCESS:** All traffic when levees are dry

**WATER LOGISTICS:** shallow draft

Limitations: depth, obstruction

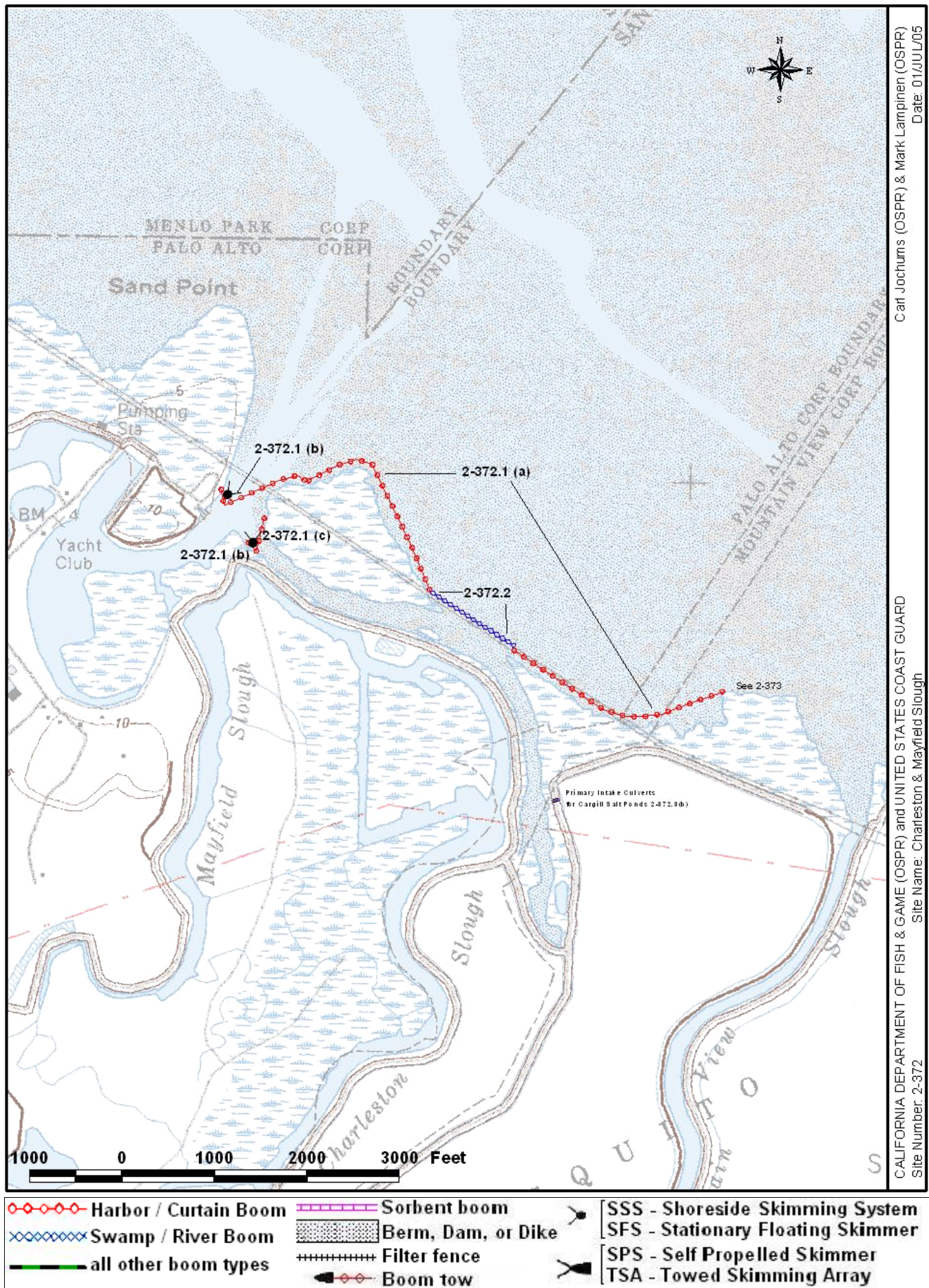
Launching, Loading, Docking and Services Available: Redwood City and Palo Alto Boat Works for launch of large vessels; Mayfield Slough public access area; hand launched vessels at Mayfield Slough dock

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Possibly Palo Alto Boat Works could be used as a staging area. Also, Mayfield Slough public access area.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



County: **Santa Clara**  
 USGS Quad: **Mountain View**

Thomas Guide Location

Latitude N  
 37 27.0  
 Longitude W  
 122 05.0

NOAA Chart: **18654 San Francisco Bay Southern Part**

Last Page Update : 7/1/1996

#### SITE DESCRIPTION:

This site includes Mountain View Slough to Hwy 101, and the bay frontage for a half mile on each side of its mouth, and the extensive mudflat at the mouth. It is located on the southwest shore of South San Francisco Bay, four miles south of Dumbarton Bridge. This slough has a fringing cordgrass and pickleweed marsh at the mouth and along its banks. An extensive mudflat, over 1 mile wide, extends from the mouth out to the main channel.

#### SEASONAL and SPECIAL RESOURCE CONCERN

Year-round vulnerability to saltmarsh, mudflat, and special status species (see Resources at Risk).

#### RESOURCES OF PRIMARY CONCERN

The cordgrass and pickleweed marsh at the mouth and along the slough channel are habitat for diverse species including some special status species. The fronting mudflat and channel bottom support a rich biota.

Sensitive bird species found here include: endangered California clapper rail, California least tern, threatened western snowy plover, California species of special concern - saltmarsh common yellowthroat, Alameda song sparrow. Also, California brown pelican, American peregrine falcon and large numbers of a wide variety of birds nest and winter here: shorebirds, waterfowl, wading birds, and waterbirds.

Sensitive mammals species found here include: Endangered - salt marsh harvest mouse; Other rare species - saltmarsh wandering shrew. Harbor seals haul out here.

The sloughs and mudflats are important habitat for fish, shellfish and infauna.

#### CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

There are probably historic and cultural sites present. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

#### KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
O		SF Bird Observatory	(408) 946-6548
T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
O	Scott Miner	US Army Corps of Engineers	(415) 503-6573
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E	Butch Paredes	Cargill Salt	(510) 790-8165

#### ADDITIONAL SITE SUMMARY COMMENTS:

## 2-373 -A Site Strategy - Mountain View Slough

County and Thomas Guide Location

Santa Clara

NOAA CHART

18654 San Francisco Bay Southern Part

## 2-373 -A

Latitude N

Longitude W

37 27.0 122 05.0

### CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

The many rare and endangered birds, animals and plants living here are threatened by oil and oil spill response and trampling. Primary concern is to exclude oil from entering the Slough. Secondary concern is to minimize the exposure of the marshes fronting the bay by protective booming. Additional impacts from response and cleanup, and tramping of oil into soft marsh and mudflat sediments are also a concern.

### HAZARDS and RESTRICTIONS:

Aircraft beware of overhead powerlines in the area. Watercraft be aware: the outlet to the bay is mostly silted in and undefined, and the water is shallow; the extensive mudflat is over 1 mile wide.

### SITE STRATEGIES

Strategy 2-373.1 Objective: Exclude oil from entering Slough and small marsh channels.

- Deploy several (3-4) layers of 4x4 swamp boom in an inverted "V" formation (chevron exclusion) at mouth of slough. Deploy sorbent boom between each layer of containment boom. Anchor with conventional anchors and stakes.
- Place fence booms in small marsh channels.
- Notify Cargill Salt to close all salt water intake culverts to the salt ponds.

NOTE: Airboat, hovercraft, helicopter deployment may be the only way to gain access to this site. In summer (dry season) it may be possible to deploy from south levee near towers.

Strategy 2-373.2 Objective: Shore line protection booming.

Deploy oil snare, swamp boom or sorbent boom along marsh front. Anchor and stake in place.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment and kinds	staff deploy	Staff tend
2-373.1	0	1500		4000	12 12/22+/danforth c chain; stakes	0	2		hovercraft or air boat may be necessary	7	
2-373.2	0		2000		4 4/22+/danforth ; stakes	0	2		hovercraft or airboats may be necessary	8	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

From Hwy 101, exit at Shoreline Blvd/Sterlin Rd and proceed bayward to Shoreland at Mountain View Park. Vehicle access is restricted: for levee road access contact City of Mountain View or Cargill Salt Co. This site includes Mountain View Slough to Hwy 101, and the bay frontage for a half mile on each side of its mouth, and the extensive mudflat at the mouth. It is located on the southwest shore of South San Francisco Bay, four miles south of Dumbarton Bridge.

**LAND ACCESS:** 2WD,LG TRK,4WD,ATV when levees are dry.

**WATER LOGISTICS:** EXTREME SHALLOW WATER

Limitations: depth, obstruction

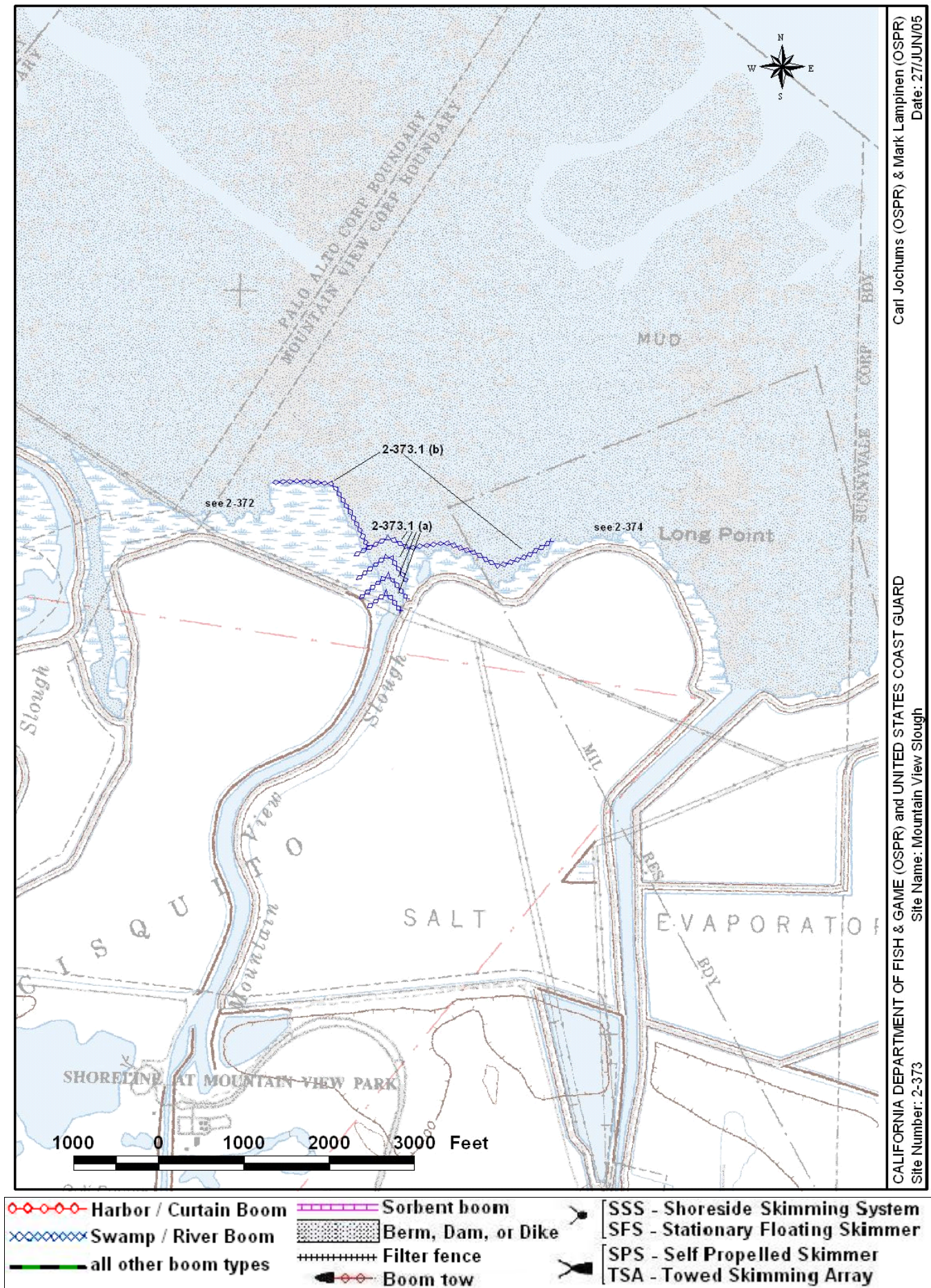
Launching, Loading, Docking and Services Available: Boat launch ramps at Redwood City. Small hand launched boats can deploy from the south levee during summer (dry season). Also, small craft launch at Mayfield Slough.

**FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:**

Staging at Port of Redwood City or public access at Mayfield Slough.

**COMMUNICATIONS PROBLEMS:**

**ADDITIONAL OPERATIONAL COMMENTS:**



County: **Santa Clara**  
 USGS Quad: **Mountain View**

Thomas Guide Location

Latitude N  
 37 27.0  
 Longitude W  
 122 04.0

NOAA Chart: **18654 San Francisco Bay Southern Part**

Last Page Update : 7/1/1996

#### SITE DESCRIPTION:

Site includes creek and marshes that fringe the banks inland (1.5 miles) to Hwy 101 and three quarters of a mile of bay frontage each side of the creek mouth. Located in the extreme South San Francisco Bay between Guadalupe Slough and Mountain View Slough, the creek channel is bounded by levees. Tidal action extends about 1.5 miles upstream. Cargill salt evaporator ponds border the bayward half of the channel, while the landward channel is industrialized to different degrees. There are very extensive mudflats (up to a mile wide) in front of creek.

#### SEASONAL and SPECIAL RESOURCE CONCERN

An "A" priority for protection year-round due to saltmarsh, mudflats, and presence of special status species/habitat. Cargill salt water pond intake culverts throughout So. Bay area.

#### RESOURCES OF PRIMARY CONCERN

The salt marsh at this site supports marsh species which are sensitive and vulnerable entire year. The other major habitat of concern are the extensive shallow mudflats.

This site supports rich bird life including the endangered California clapper rail and a variety of herons, shorebirds and waterfowl.

The endangered salt marsh harvest mouse occurs in this area.

The mudflats are habitat for a diverse infauna (clams, worms, etc.) and are foraging habitat for fish and birdlife.

#### CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

There are probably historic and cultural sites present. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

#### KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
O		SF Bird Observatory	(408) 946-6548
T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
O	Scott Miner	US Army Corps of Engineers	(415) 503-6573
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E	Butch Paredes	Cargill Salt	(510) 790-8165

#### ADDITIONAL SITE SUMMARY COMMENTS:

## 2-374 -A Site Strategy - Stevens Creek

County and Thomas Guide Location

Santa Clara

NOAA CHART

18654 San Francisco Bay Southern Part

## 2-374 -A

Latitude N

Longitude W

37 27.0 122 04.0

### CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

The concern is oil and response impacts to marsh, wildlife, and rare and endangered birds, animals and plants which are present year-round. Primary objective is to minimize exposure by excluding oil from entering Stevens Creek. Secondary objective is to minimize exposure and impacts to bay frontage marshes by protective booming. Always of concern is the impacts resulting from response and cleanup: avoid trampling marsh and sensitive plants and animals, avoid disturbing soft mudflats, and avoid trampling oil into marsh and mud.

### HAZARDS and RESTRICTIONS:

Aircraft beware of high power wires in the area. Vessels be aware of shallow water.

### SITE STRATEGIES

Strategy 2-374.1 Objective: Exclude oil from entering the creek. Deflect oil down-coast.

Deploy several (3-4) layers of 100 ft 4x4 swamp boom in an inverted "V" formation (chevron) at mouth of creek. Place Sorbent booms between each layer. Responders may be able to use tidal barrier boom straight across mouth.

Strategy 2-374.2 Objective: Protective booming of marsh front

Line bayfront marshes w/ 7000 ft of oil snare or sorbent boom.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-374.1	0	400		800	8 anchors & stakes	0	2			4	
2-374.2	0		7000 SN	7000							

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

From Hwy 101, exit at Shoreline Blvd/Sterlin Rd and proceed bayward to Shoreland at Mountain View Park. Further vehicle access is restricted: for levee road access contact City of Mountain View or Cargill Salt Co. Site includes creek and marshes that fringe the banks inland (1.5 miles) to Hwy 101 and three quarters of a mile of bay frontage each side of the creek mouth. Located in the extreme South San Francisco Bay between Guadalupe Slough and Mountain View Slough, the creek channel is bounded by levees.

**LAND ACCESS:** LG truck, 2WD : Levee roads impassable in winter.

**WATER LOGISTICS:** Very shallow/no access at low tide

Limitations: depth, obstruction

Launching, Loading, Docking Launch skiffs upstream at mid to high tide.

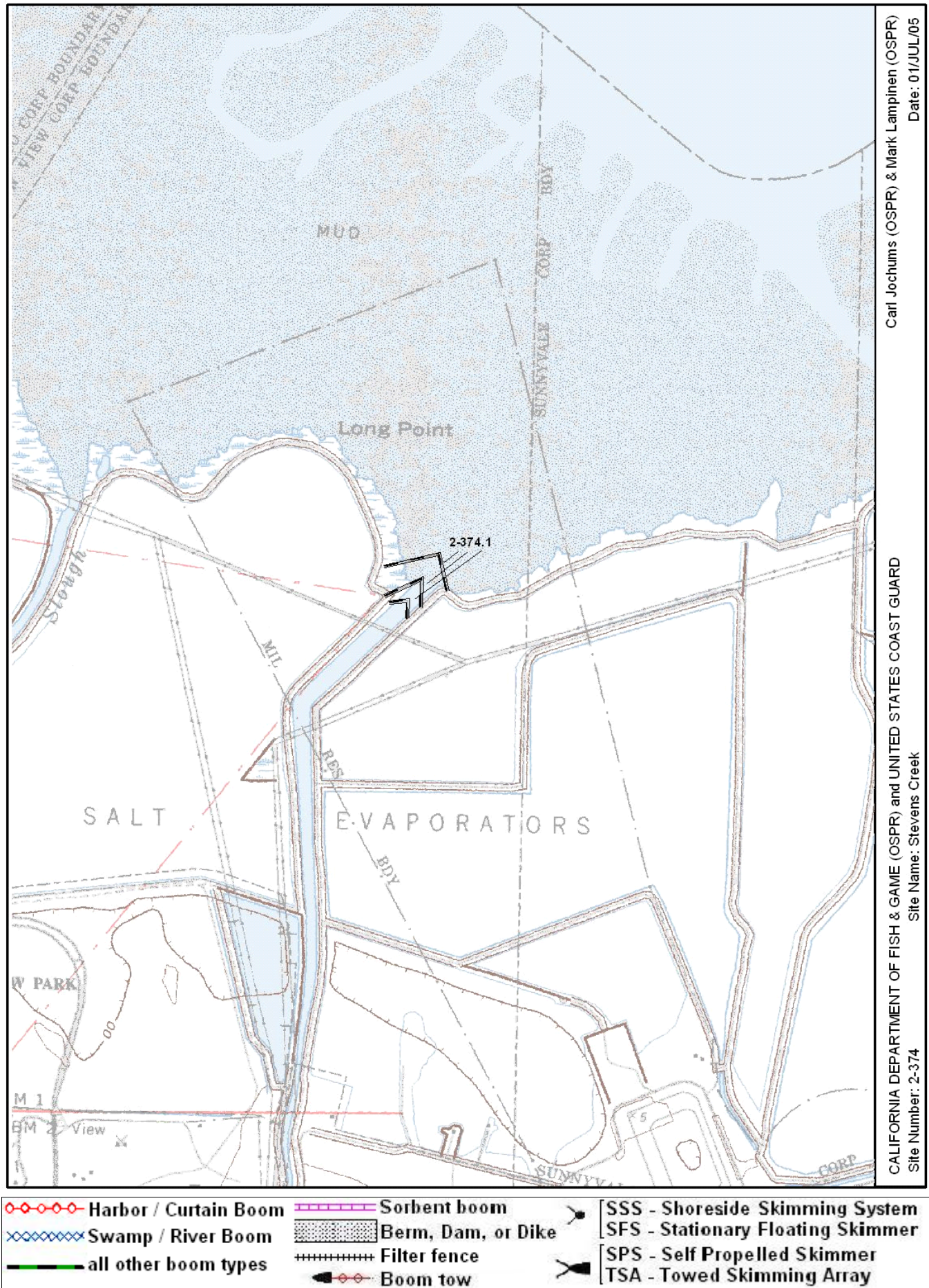
and Services Available:

**FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:**

Stage upstream in business parking area..

**COMMUNICATIONS PROBLEMS:**

**ADDITIONAL OPERATIONAL COMMENTS:**



County: **Santa Clara**  
 USGS Quad: **Mountain View**

Thomas Guide Location

Latitude N  
37 27.0  
 Longitude W  
122 02.0

NOAA Chart: **18654 San Francisco Bay Southern Part**

Last Page Update : 7/1/1997

#### SITE DESCRIPTION:

Guadalupe Slough extends from its mouth on Coyote Creek inland about five miles to Sunnyvale Baylands County Park and beyond though the City of San Jose. This site is a large channel on the southwest shore of South San Francisco Bay, four miles southeast of the Dumbarton Bridge. This site has marshes and mudflats near its mouth and along its banks, cordgrass and pickleweed marshes on both sides. This large levee-bound slough is a navigable waterway with strong currents near the mouth. Cargill Salt Co. evaporation ponds border most of the length of this slough.

#### SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority year-round due to vulnerable saltmarsh plants and wildlife (see Resources at Risk).

#### RESOURCES OF PRIMARY CONCERN

There are saltmarshes (Spartina and Salicornia) and mudflats along the bay frontage and the length of the slough which are vulnerable to oil impacts.

Sensitive bird species found here include: Endangered - California clapper rail, California least tern; Threatened - western snowy plover; California Species of Special Concern: saltmarsh common yellowthroat, Alameda song sparrow. Also, California brown pelican, American peregrine falcon and large numbers of a wide variety of birds nest and winter here: shorebirds, waterfowl, wading birds, and waterbirds.

Sensitive mammals species found here include: California Species of Special Concern - saltmarsh wandering shrew.

The drainage supports a small run of chinook salmon. The mudflats have a rich infauna and are important habitat for fish and wading birds.

Shellfish.

#### CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

There are probably historic and cultural sites present. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

#### KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
O		SF Bird Observatory	(408) 946-6548
T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
O	Scott Miner	US Army Corps of Engineers	(415) 503-6573
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E	Butch Paredes	Cargill Salt	(510) 790-8165

#### ADDITIONAL SITE SUMMARY COMMENTS:

## 2-375 -A Site Strategy - Guadalupe Slough

County and Thomas Guide Location

Santa Clara

NOAA CHART

18654 San Francisco Bay Southern Part

## 2-375 -A

Latitude N

Longitude W

37 27.0 122 02.0

### CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

The concern is oil and response impacts to marsh, wildlife, and rare and endangered birds, animals and plants which are present year-round. Primary objective is to minimize exposure by excluding oil from entering Guadalupe Slough. Secondary objective is to minimize exposure and impacts to bay frontage marshes by protective booming. Always of concern is the impacts resulting from response and cleanup: avoid trampling marsh and sensitive plants and animals, avoid disturbing soft mudflats, and avoid trampling oil into marsh and mud. Notify Cargill Salt Co. to close any water intake structures

### HAZARDS and RESTRICTIONS:

Aircraft beware of overhead powerlines in area. Vessels be aware of strong currents exist near the mouth and shallow mudflats. Vehicles be aware that levees are impassable in wet winters.

### SITE STRATEGIES

Strategy 2-375.1 Objective: Exclude oil from entering Guadalupe Slough and adjacent marshes.

- Deploy 2500 ft of 9X9+ Hboom from both levees towards skimmer in part of channel with slow current. Use tidal barrier or swamp boom across marsh and mudflat. Strong currents will make location of equipment upstream from mouth probable. ALTERNATIVE: Use several layers (2-3) of 4x4 swamp boom (7500 ft) with less skirt in strong currents. Use same configuration as in step 1.
- Place skimmers outside mouth in deeper water near confluence of Coyote Creek and Guadalupe Slough.
- Notify Cargill Salt Co. to close any salt water intake culverts to salt ponds in area.

Strategy 2-375.2 Objective: Protective booming of bayfrontage marshes from oiling and oil intrusion.

To minimize oil entering slough along fringing tidal marsh, deploy 1000 ft of sorbent or swamp boom along marsh front outside mouth in both directions.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-375.1	2500	7500				2	2	2 SPS or S		32	
2-375.2	0	1000				0	2			8	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

From Hayward-San Mateo Bridge, take Hwy 101 south to Hwy 237 east. Exit at Caribbean Drive and proceed to Borregas Avenue. Contact City of Sunnyvale Water Pollution Control Plant (see add'l contact list). Access restricted by NASA and the US Navy. Guadalupe Slough extends from its mouth on Coyote Creek inland about five miles to Sunnyvale Baylands County Park and beyond though the City of San Jose. This site is a large channel on the southwest shore of South San Francisco Bay, four miles southeast of the Dumbarton Bridge.

**LAND ACCESS:** 2WD,LG Truck,4WD

**WATER LOGISTICS:** Possible at low tide only

Limitations: depth, obstruction

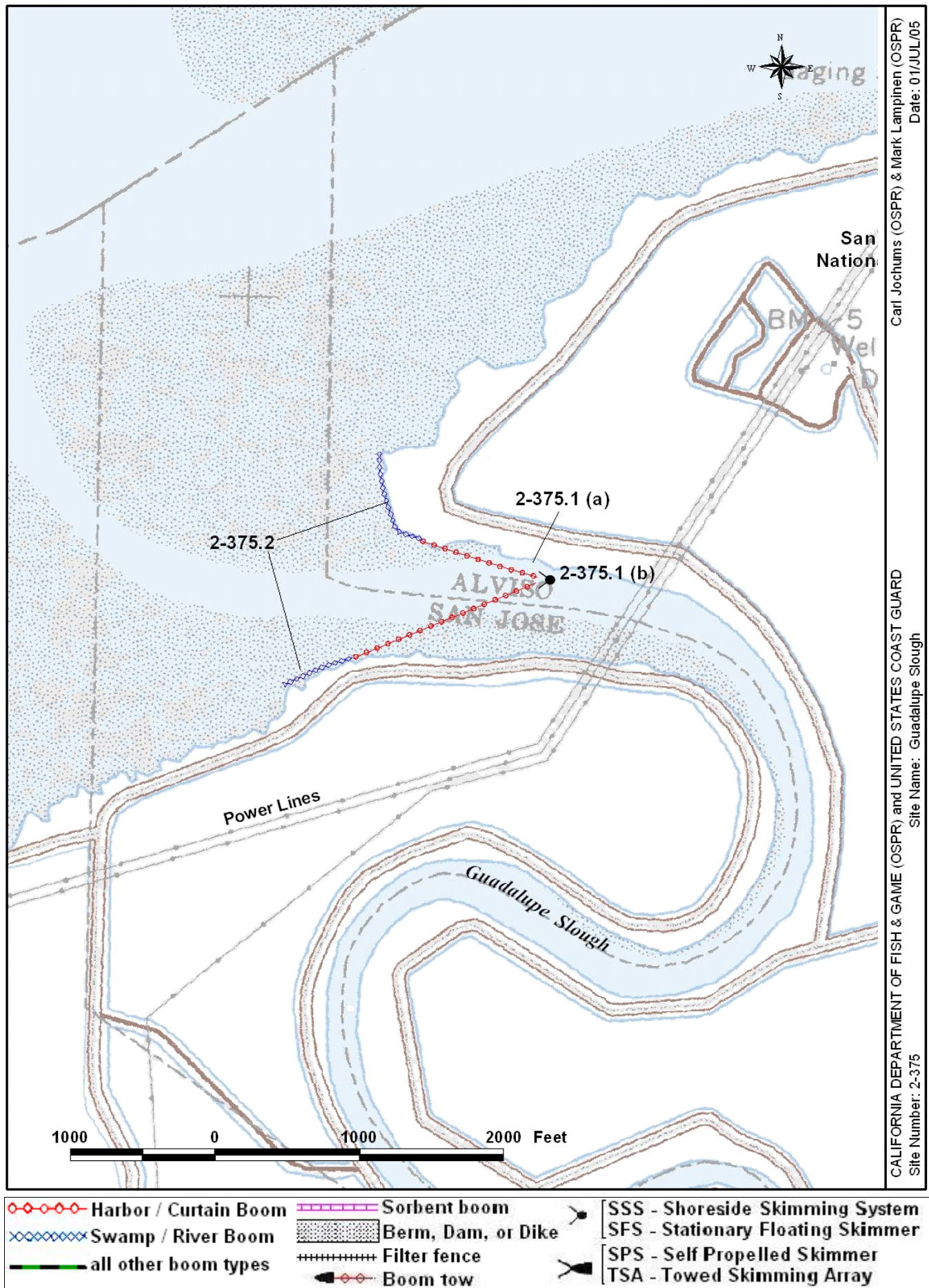
Launching, Loading, Docking and Services Available: Small boat ramp at NASA fuel barge dock upstream: entry by permission only through Moffett Field; road is paved. Redwood City launch ramp for all size boats.

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

There is a small staging area at NASA fuel barge dock. Larger staging may be arranged at Moffatt Field.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



County: **Santa Clara**  
 USGS Quad: **Mountain View**

Thomas Guide Location

Latitude N

Longitude W

37 27.0

122 01.0

NOAA Chart: **18654 San Francisco Bay Southern Part**

Last Page Update : 7/1/1996

**SITE DESCRIPTION:**

Site extends from the mouth on Coyote Creek inland for about six miles to the railroad track at Alviso Marina. This is a waterway with marshes and mudflats near its mouth and along its banks. Alviso Slough is a water channel on the southwest shore of south San Francisco Bay, five miles southeast of the Dumbarton Bridge. It is a tributary to Coyote Creek surrounded by saltmarsh. The northeasterly and first two miles of west margins are part of San Francisco Bay National Wildlife Refuge.

**SEASONAL and SPECIAL RESOURCE CONCERN****RESOURCES OF PRIMARY CONCERN**

There are pickleweed and cordgrass marshes along the slough.

Sensitive bird species found here include: Endangered - California clapper rail, California least tern; Threatened - western snowy plover; California Species of Special Concern: saltmarsh common yellowthroat, Alameda song sparrow. Also, California brown pelican, American peregrine falcon, and large numbers of a wide variety of birds nest and winter here: shorebirds, waterfowl, wading birds, and waterbirds.

Sensitive animal species found here include: Endangered - salt marsh harvest mouse and CA Species of Special Concern -salt marsh wandering shrew.

Shellfish, fish are present

Sensitive plant species found here include: the Delta tule pea, (*Lathyrus jepsonii* ssp. *jepsonii*), and northcoast bird's-beak (*Cordylanthus maritimus* ssp. *Palustris*).

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

There are probably historic and cultural sites present. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
O		SF Bird Observatory	(408) 946-6548
T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
O	Scott Miner	US Army Corps of Engineers	(415) 503-6573
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E	Butch Paredes	Cargill Salt	(510) 790-8165

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-376 -A Site Strategy - Alviso Slough

County and Thomas Guide Location

Santa Clara

NOAA CHART

18654 San Francisco Bay Southern Part

## 2-376 -A

Latitude N

Longitude W

37 27.0 122 01.0

### CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

The concern is oil and response impacts to marsh, wildlife, and rare and endangered birds, animals and plants which are present year-round. Primary objective is to minimize exposure by excluding oil from entering Alviso Slough. Secondary objective is to minimize exposure and impacts to bay frontage marshes by protective booming. Always of concern is the impacts resulting from response and cleanup: avoid trampling marsh and sensitive plants and animals, avoid disturbing soft mudflats, and avoid trampling oil into marsh and mudflats.

### HAZARDS and RESTRICTIONS:

Be aware of overhead powerlines and shallow water. Head of slough at marina almost completely silted in.

### SITE STRATEGIES

Strategy 2-376.1 Objective: Collection booming to prevent oil from entering Alviso Slough.

Deploy 18" + or 8" + curtain boom from both levees to skimmer in mid-channel. Use tidal barrier boom or swamp boom across marsh and mudflat.

Strategy 2-376.2 Objective: Deflect oil past slough and keep oil in Coyote Creek for skimming.

a. Deflection boom, using 100' segments, along south shore of Coyote Creek to keep oil away from Alviso Slough and in deep water.

b. Deploy boom and skimmers near power line towers for collection.

Strategy 2-376.3 Objective: Protective booming of marsh front near mouth.

Line marsh front near mouth with swamp and sorbent boom.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-376.1	1000	2000		2000	10 Anchors and stakes	0	2	2 SFS		9	
2-376.2	0							1 SFS			
2-376.3	0										

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Take Hwy 880 south to Hwy 237 west and exit at Zanker Road. Turn right on Zanker Road to Esteros Road. Follow Esteros Road to Access Road which leads to the Alviso Slough. Roadway access is secured by a locked gate. Contact San Jose/Santa Clara Water Pollution Control to gain entry. 700 Esteros Road, San Jose, CA (408) 945-5300 (24 hours). Access to levee from SFBNWR and Cargill Salt Co. Site extends from the mouth on Coyote Creek inland for about six miles to the railroad track at Alviso Marina.

**LAND ACCESS:** 4WD

**WATER LOGISTICS:** Shallow draft vessels <6'

Limitations: depth, obstruction

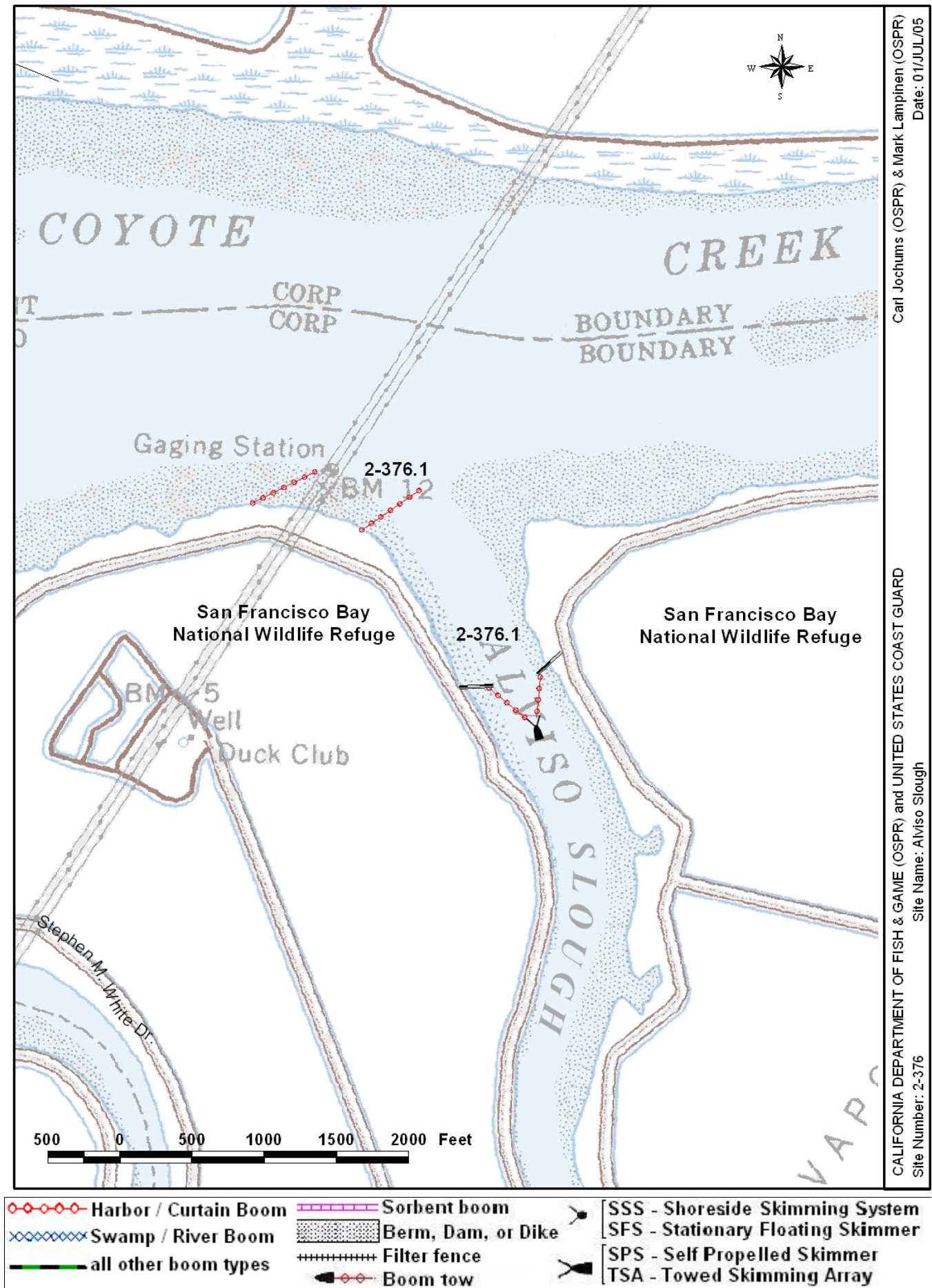
Launching, Loading, Docking and Services Available: Small boats at high tide at Alviso Marina. Redwood City launch ramp for all boats.

**FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:**

Alviso Marina

**COMMUNICATIONS PROBLEMS:**

**ADDITIONAL OPERATIONAL COMMENTS:**



County: **Santa Clara**  
 USGS Quad: **Milpitas**

Thomas Guide Location

Latitude N

Longitude W

37 27.0

121 58.0

NOAA Chart: **18654 San Francisco Bay Southern Part**

Last Page Update : 7/1/1995

**SITE DESCRIPTION:**

This slough is a tributary of Coyote Creek (2-346) in the extreme end of south San Francisco Bay. It extends from its confluence with Coyote Creek upstream to the outfall of the San Jose Sewage Treatment Plant (STP). Mallard Slough has fresh and brackish marshes along its banks due to the freshwater input from the San Jose STP (the largest freshwater source for South San Francisco Bay). This freshwater inflow maintains brackish conditions for most of Coyote Creek. The slough is leveed, resulting in strip marshes along the banks. Cargill salt evaporation ponds flank the slough, and the STP and urban development form its headwaters. Most of the slough is in South San Francisco Bay National Wildlife Refuge.

**SEASONAL and SPECIAL RESOURCE CONCERN**

This slough has "A" priority throughout the year; however, it is most vulnerable from 1 April through 31 August when herons are nesting: egrets and ibises build nests in the tules.

**RESOURCES OF PRIMARY CONCERN**

This shallow slough is fringed with emergent brackish and freshwater marsh, with shallow fronting mudflats.

This is an important rookery for herons and egrets. Over 700 pairs of the following birds nest in the area: Snowy Egrets, Great Egrets, Black-crowned Night herons, Little Blue heron, White-faced ibis.

**CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES**

There are probably historic and cultural sites present. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

**KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)**

Type	Name / Title	Organization	Phone
T	Joy Albertson	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222
E/T	Erik Mruz Mgr - Don Edwards NWR	US Fish & Wildlife Service, SF Bay (NWR)	(510) 792-0222

**ADDITIONAL SITE SUMMARY COMMENTS:**

## 2-378 -A Site Strategy - Mallard Slough

County and Thomas Guide Location

Santa Clara

NOAA CHART

18654 San Francisco Bay Southern Part

## 2-378 -A

Latitude N

Longitude W

37 27.0 121 58.0

### CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

Concern is to exclude oil from entering the slough. If oil enters the slough and oils marshes, stay out of the slough. Activity should proceed only with presence of US Fish and Wildlife experts since this is an important nesting area for herons, especially in April through August: there could be severe impacts from cleanup activity.

### HAZARDS and RESTRICTIONS:

Vessels should be aware of shallow water: Mud Slough is silted in - no access.

### SITE STRATEGIES

Strategy 2-378.1 Objective: Exclusion booming at mouth Coyote Creek. Collect oil at Coyote Creek/Alviso Slough.

- a. In addition to on water skimming near mouth of Coyote Creek and near powerline towers, place 2 lines of deflection 9X9+ Hboom (2 X 1000) across Mud Slough from north bank to point of land between channels.
- b. In Coyote Creek, near confluence with Mud Slough, use deflection 9X9+ Hboom(1500ft) from both banks to center of channel to skimmer. NOTE: Mud Slough is silted in at low tide and inaccessible to boats. The current tends to flow past Mud Slough and continues up Coyote Creek.

### Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
2-378.1	3500				9 9/22+/danforth	2	2	1 SPS		14	

### LOGISTICS

**DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)**

Foot and vehicle access: contact SF Bay National Wildlife Refuge. Boat access: approach via Coyote Creek. This slough is a tributary of Coyote Creek (2-346) in the extreme end of south San Francisco Bay. It extends from its confluence with Coyote Creek upstream to the outfall of the San Jose Sewage Treatment Plant (STP).

**LAND ACCESS:** Levee roads can support a wide variety of vehicles during dry months.

**WATER LOGISTICS:** Very shallow water

Limitations: depth, obstruction

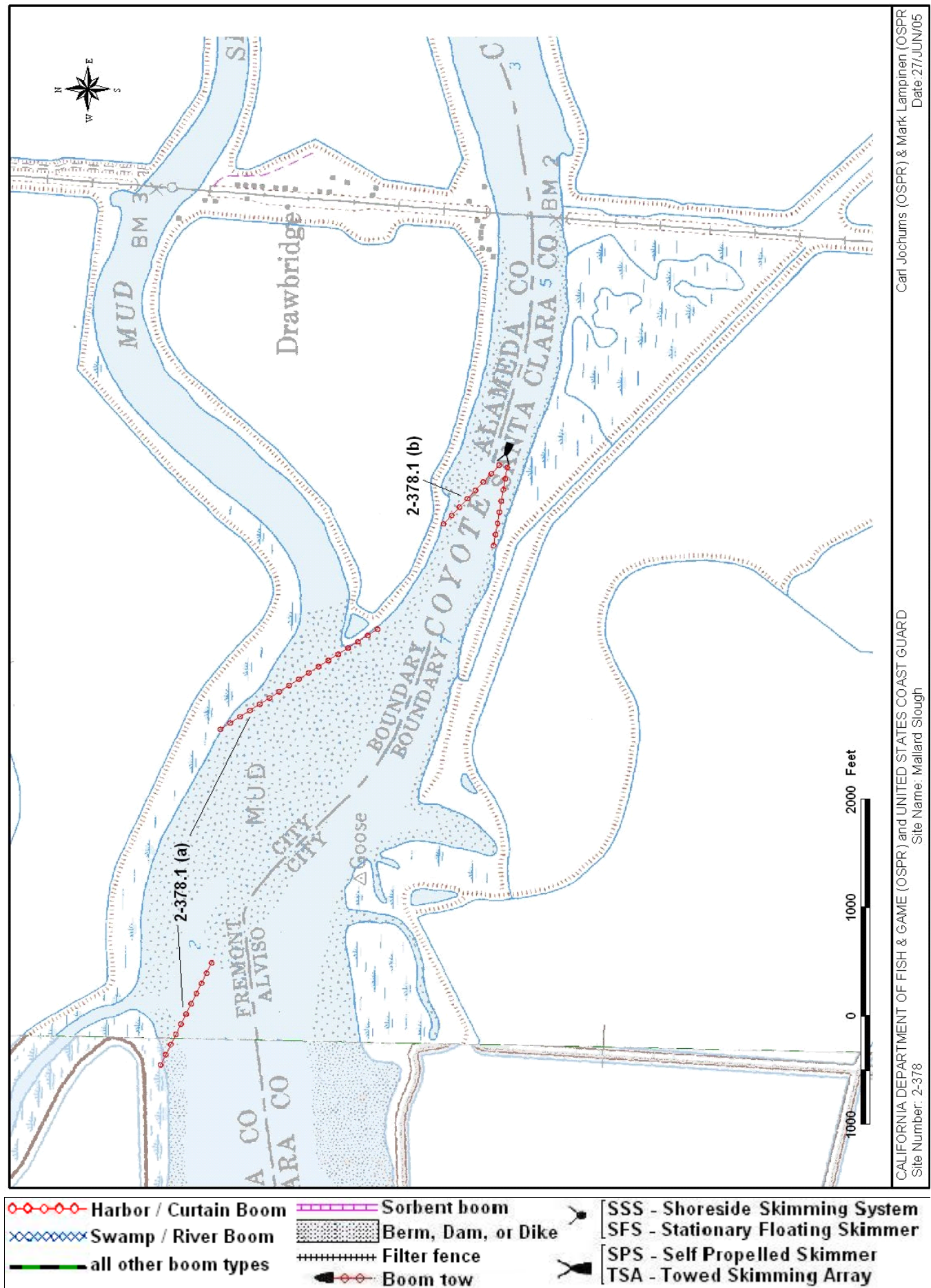
Launching, Loading, Docking Only small boats can be launched from levees. Nearest boat ramp is at Redwood City Harbor.  
and Services Available:

### FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

From adjacent levees or Redwood City Harbor.

### COMMUNICATIONS PROBLEMS:

### ADDITIONAL OPERATIONAL COMMENTS:



Carl Jochums (OSPR) & Mark Lampinen (OSPR)  
Date: 27/JUN/05

CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD  
Site Number: 2-378  
Site Name: Mallard Slough

## **9843.2 Cultural and Other Resources at Risk**

### **9843.21 Cultural Resources, Historic and Archeological Resources**

– see [Section 9802.1](#), and [Section 9840](#) for contact table, and individual Site Summaries

### **9843.22 Essential Fish Habitat – see [Section 9802.2](#)**

### **9843.23 Other Resources at Risk/Eelgrass**

– also see [Section 9840](#) and individual Site Summaries

The shallow subtidal areas and tidal flats of the San Francisco Bay and Delta region support relatively few plant communities. Eelgrass (*Zostera marina*) is currently the only seagrass found in San Francisco Bay. Eelgrass beds create a valuable shallow-water habitat, providing shelter, feeding, and/or breeding habitat for many species of invertebrates, fishes, and waterfowl. The current eelgrass populations may be the last remnants in San Francisco Bay and are extremely vulnerable to local extinction. Eelgrass beds can vary in distribution, density, and height from year to year. Eelgrass is vulnerable to oil based on its location and physiology.

Eelgrass is more vulnerable to oil than most marine and aquatic plants. Eelgrass leaves are rough and do not have a mucous layer like many seaweeds, therefore oil will readily attach. Eelgrass occurs in shallow water and often forms a canopy layer on the water surface, presenting an increased risk of oiling. Oil sticks to the floating eelgrass tops. Once eelgrass gets fouled with oil, oil becomes a subsurface threat to fish and other organisms which thrive in this cover and the leaves will continue to sheen, prolonging oil exposures.

Site specific areas containing eelgrass beds have been identified in this GRA subsection and in some instances as an individual Sensitive Site. Protective strategies for eelgrass are based on its location and surface exposure in the intertidal and subtidal zones. Eelgrass would be exposed to oil and is at greatest risk in areas where it is found in the intertidal zone, but oiling can also occur with subtidal eelgrass beds when eelgrass leaves are at the surface during spring tides, particularly in the summer months.

A Sensitive Site with eelgrass as its sensitive resource is given a Category “A” resource sensitivity when eelgrass leaves are exposed at the surface during the spill and a Category “C” when the leaves stay submerged. If a spill occurs, an OSPR Resources At Risk Technical Specialist must assess the site to determine if eelgrass is at risk based on density, location and tidal exposure. Specific Site Strategies for protection of eelgrass beds are found in the individual GRA's Sensitive Site Strategy and include assessment and booming recommendations.



### 9843.3 Economic Sites

Strictly economic resources are designated as the third priority for dedication of oil spill response resources, following human health and safety and environmental resources. The economic sites are ranked using a continuation of the environmental scale with D, E, and F categories. Economic resources that have a greater potential for long-term damages receive a higher rank or priority for emergency response.

The following criteria or definitions are used to categorize economic resources in terms of priority for response:

D = Economic activities and resources which require high water quality for their operations or existence. Resources that fall into this category would face severe, long-term economic impacts from a spill.

E = Facilities, businesses, or resources which directly use coastal or bay waters within their economic activity and which are at risk of oiling from a spill in marine waters. The resources falling into this category would face significant disruption of their activity, but shorter term potential damages from oiling than resources “D” category.

F = This category contains marine associated facilities, businesses and resources. These resources would face economic impacts from a marine spill, but do not depend directly on marine water for their economic base. Resources in this category will tend to face less severe damages than those identified in categories D or E.

In the following section, economic sites found within the GRA are listed in table format, which contain information such as latitude, longitude, economic sensitivity, etc. Following the table are diagrams denoting the location of an economically sensitive site(s). Diagrams are organized alphabetically by county, then numerically by map and site number.

Economic Sites in GRA 3							Economic Sensitivity	Longitude	Latitude	Site Function	Site Address
Line No.	County	Site Name	Site Description	Site Name	Site Description	Site Address					
1	Alameda	US Coast Guard Support Center Alameda	USCG Pacific Area Commander								
2	Alameda	Tidewater Sand & Gravel	Rescue Coordination Center Marine								
3	Alameda	Stone Boat Yard	Safety Office Pacific Logistics HQ								
4	Alameda	CONAGRA Flour Milling Company	Ship Support								
5	Alameda	Sea Power Marine									
6	Alameda	DUFRA Construction									
7	Alameda	Crowley Maritime									
8	Alameda	Metropolitan California Stevedore Co.									
10	Alameda	Stevedoring Services of America - Howard Terminal	Berths 67-69								
11	Alameda	Schnitzer Steel Industries	Foot of Adeline Street								
12	Alameda	Alameda Gateway Inc., Crowley Maritime									
13	Alameda	American President Lines									
14	Alameda	Oscar Niemeth Towing									
15	Alameda	Matson Terminals, Inc.	Berths 32-34								
16	Alameda	Maersk Line	Berth 24								
17	Alameda	Transbay Container Terminal	Berths 25 & 26								
18	Alameda	Ouler Harbor Marine	Berth 23								
19	Alameda	Sea-Land Container Terminal	Berths 20-22								
20	Alameda	Bay Bridge Terminal	Berths 8-10								
21	Alameda	Club Nautique									
22	Alameda	Mariner Yacht Charters	Jack London Square								
23	Alameda	Quinn's Lighthouse Restaurant									
24	Alameda	Seabreeze Cafe									
25	Alameda	The Reef Restaurant									
26	Alameda	Pier 29 Restaurant									
27	Alameda	Shenigans Restaurant									
28	Alameda	Jack's Waterfront Restaurant									
29	Alameda	The Whales Tale Restaurant									
30	Alameda	Robert Crown Memorial State Beach	c/o East Bay Regional Park District								
31	Alameda	San Francisco Bay National Wildlife Refuge	Fremont Unit, Mowry Unit, Aviso Unit,								
32	Alameda	Coyote Hills Regional Park	c/o East Bay Regional Park District								
33	Alameda	Hayward Regional Shoreline	c/o East Bay Regional Park District								
34	Alameda	San Leandro Bay Regional Shoreline	c/o East Bay Regional Park District								
64	Alameda	Acollan Yacht Club	Oakland Estuary								
65	Alameda	Mariner Square	Oakland Estuary								
66	Alameda	Barnhill Marina	Oakland Estuary								
67	Alameda	Alameda Marina	Oakland Estuary								
68	Alameda	Fortman Marina	Oakland Estuary								
69	Alameda	Mariner Boat Yard, Inc.	Oakland Estuary								
70	Alameda	Grand Marina and Park Street Landing	Oakland Estuary								
71	Alameda	Marina Village Yacht Harbor	Oakland Estuary								
72	Alameda	Oakland Yacht Club/Pacific Marina	Oakland Estuary								
73	Alameda	Enchil Yacht Club	Oakland Estuary								
74	Alameda	Nelson's Marine, Inc.	Alameda Bay								
75	Alameda	Ballena Isle Marina (Almar Corp.)	San Francisco East Bay								
76	Alameda	Embarcadero Cove Marina	Oakland Estuary								

Economic Sites in GRA 3								
Line No.	County	Site Name	Site Description	Latitude	Longitude	Economic Sensitivity	Site Function	Site Address
77	Alameda	Fifth Avenue Marina	Oakland Estuary	37.79	-122.26	E	107 Slips	499 Embarcadero & 1 Fifth Avenue Oakland 94606
78	Alameda	Portobello Marina/D Anna Yacht Center	Oakland Estuary	37.79	-122.27	E	Small craft harbor/Boat sales, training	11 Embarcadero West, Oakland 94607
80	Alameda	Marinemax	Oakland Estuary	37.79	-122.25	F	Marine Retailer	1285 Embarcadero, Oakland 94605
81	Alameda	Martin Luther King Jr. Regional Shoreline	San Leandro Bay	37.74	-122.20	F	Public Recreation	7001 Edgewater Drive, Oakland 94605
83	Alameda	San Leandro Marina	San Francisco East Bay	37.70	-122.19	E	455 berths, launch ramp, yacht clubs	40 San Leandro Marina, San Leandro 94577
35	San Francisco	South Beach Harbor	San Francisco West Bay	37.78	-122.38	E	Large Marina, 700 Slips	The Embarcadero at Pier 40 San Francisco 94107
36	San Francisco	China Basin		37.78	-122.39	E/F	Boat Launches, Dry Dock, Restaurant, Entrance to Mission Creek, Houseboats	
37	San Francisco	Pier 80 North		37.75	-122.37	E	Container Terminal, Cargo and Shipping	
38	San Francisco	Pier 96 South		37.74	-122.37	E	Container Terminal, Cargo and Shipping	
39	San Francisco	Pier 98		37.74	-122.37	E	Landfill, Wetlands, Public Park	
46	San Francisco	San Francisco International Airport		37.62	-122.38	D	International Commercial Airport	
85	San Francisco	Pier 38 MRC, Inc.	San Francisco West Bay	37.78	-122.38	E	Berthing	Pier 38, The Embarcadero San Francisco 94107
40	San Mateo	Brisbane Shoreline and Lagoon	Sierra Point Pkwy East of Hwy 101.	37.68	-122.39	E	Public Managed Fishing & Recreation Area	
41	San Mateo	Brisbane Marina	Guadalupe Canal has Free Flow to Brisbane Lagoon	37.67	-122.39	E	Recreational Berths	400 Marina Blvd., Brisbane
42	San Mateo	Oyster Cove Marina		37.67	-122.39	E	Recreational Berths	385 Oyster Cove, South San Francisco
43	San Mateo	Oyster Point Marina	San Francisco West Bay	37.66	-122.38	E	Recreational Berths/Launch Ramp/Fuel/Hoist	95 Harbor Master Blvd., South San Francisco
44	San Mateo	South San Francisco Shoreline		37.65	-122.37	F	Non-Coastal Dependent Industry	
45	San Mateo	San Bruno Canal		37.65	-122.38	F	Non-Coastal Dependent Industry	
47	San Mateo	Millbrae/Burlingame Shoreline		37.60	-122.37	E	Hike/Bike Trail/ Burlingame Wildlife Sanctuary, Burlingame Recreational Slough/ Private Hotels, Restaurants, and Businesses	
48	San Mateo	Coyote Point Marina	San Francisco South Bay	37.59	-122.32	E	Recreational Berths/Ramp and Fuel	1900 Coyote Point Drive, San Mateo 94401
49	San Mateo	San Mateo Hike/Bike Trail		37.58	-122.28	E	Tide Gates	
50	San Mateo	Foster City Shoreline	Residential just South of San Mateo Bridge	37.57	-122.25	E	Hike/Bike Trail, Residential, Water Intakes for Lagoons	
51	San Mateo	Redwood Shores, Belmont Slough, Wildlife Refuge		37.55	-122.23	E	Private Residences, Publicly Redwood City Managed	
52	San Mateo	Redwood City, Bair Island, Grecco Island, Corkscrew Slough, Steinberger Slough, Redwood Creek		37.54	-122.19	E	City Shoreline, Salt Pond, Publicly Managed Wildlife Refuge	
53	San Mateo	Port of Redwood City	Can Provide Support Facilities	37.51	-122.21	E	Commercial Deepwater Port	675 Seaport Blvd., Redwood Creek
54	San Mateo	Port of Redwood City Yacht Harbor		37.50	-122.20	E	Recreational Berths Launch Ramp	451 Seaport, Redwood Creek
55	San Mateo	Pete's Harbor	Smith's Slough	37.50	-122.22	E	Recreational Berths, Restaurants	1 Uccelli Blvd., Redwood City
56	San Mateo	Docktown Marina	San Francisco South Bay (Redwood Creek)	37.49	-122.22	E	Recreational Berths, Ramp Hoists, Retail Supplies	1548 Maple Street, Redwood Cit
57	San Mateo	Menlo Park Shoreline, Ravenswood Slough, Cooley Landing Marsh		37.50	-122.12	D	Publicly Managed Wildlife Refuge/Salt Ponds	
89	San Mateo	Spinnaker/Port of Redwood City Yacht Harbor	San Francisco South Bay (Redwood Creek)	37.50	-122.21	E	Waterfront public access, boat launching facility	451 Seaport Court, Redwood City 94063
90	San Mateo	Redwood City Marina	San Francisco South Bay (Redwood Creek)	37.50	-122.21	E	Small craft harbor	451 Seaport Court, Redwood City 94063
92	San Mateo	Parkside Aquatic Park	Seal Slough	37.56	-122.29	E	Public Recreation	1097 Seal Court, San Mateo 94401
96	San Mateo	Marine Collection	San Francisco West Bay	37.66	-122.38	E		671 Marina Boulevard South San Francisco 94080
58	Santa Clara	Palo Alto Airport		37.45	-122.11	E	Regional Airport	1925 Embarcadero Road, Palo Alto
59	Santa Clara	San Francisco Bay National Wildlife Refuge, Aviso Unit						
60	Santa Clara	Aviso Marina Park	Alviso Unit c/o City of Sunnyvale	37.45	-121.99	D	Park/Preserve Area	
61	Santa Clara	Sunnyvale Baylands County Park	c/o City of Sunnyvale	37.42	-121.98	D	Park/Recreational Area	
62	Santa Clara	Shoreline Park	c/o City of Sunnyvale	37.42	-122.01	D	Park/Recreational Area	
63	Santa Clara	Byxbee Park (Baylands Nature Preserve)	c/o City of Mountain View c/o City of Palo Alto	37.43	-122.08	D	Park/Recreational Area	3070 N. Shoreline Blvd., Mountain View 3201 E. Bayshore Road, Palo Alto

Economic Sites in GRA 3							
Line No.	County	Site Name	Site Description	Latitude	Longitude	Economic Sensitivity	Site Function
84	Santa Clara	South Bay Yacht Club	San Francisco South Bay (Alviso Slough)	37.43	-121.98	E	Historical building
							Site Address
							1491 Hope, Alviso 95002

# Alameda County



Economically Significant Sites - GRA3



0 0.25 0.5 1 Miles



California Department of Fish and Game  
Office of Spill Prevention and Response  
Alameda Co, Layout 0

## Alameda County



Economically Significant Sites - GRA3

American  
President Lines,  
Line No. 13

Stevedoring Services  
of America - Howard Terminal,  
Line No. 10

Jack's Waterfront Restaurant,  
Line No. 28

Shenanigans Restaurant,  
Line No. 27

Mariner Yacht Charters,  
Line No. 22

Portobello Marina/D Anna  
Yacht Center, Line No. 78

Schnitzer Steel Industries,  
Line No. 11

Mariner Square,  
Line No. 65

Marina Village  
Yacht Harbor,  
Line No. 71

Oakland Yacht Club/  
Pacific Marina,  
Line No. 72

Barnhill Marina,  
Line No. 66

Alameda Gateway  
Inc., Crowley  
Maritime, Line No. 12

Encinal Yacht Club,  
Line No. 73

0 0.25 0.5 1 Miles



California Department of Fish and Game  
Office of Spill Prevention and Response  
Alameda Co, Layout 003

## Alameda County



Economically Significant Sites - GRA3

Quinn's Lighthouse  
Restaurant,  
Line No. 23

The Reef Restaurant,  
Line No. 25

Crowley Maritime,  
Line No. 7

Seabreeze Cafe,  
Line No. 24

Marinemax,  
Line No. 80

Fifth Avenue  
Marina,  
Line No. 77

US Coast Guard  
Support Center  
Alameda, Line No. 1

Metropolitan  
California Stevedore  
Co., Line No. 8

Embarcadero  
Cove Marina,  
Line No. 76

Fortman  
Marina,  
Line No. 68

Grand Marina and  
Park Street Landing,  
Line No. 70

Mariner Boat  
Yard, Inc.,  
Line No. 69

Alameda Marina,  
Line No. 67

0 0.125 0.25 Miles



California Department of Fish and Game  
Office of Spill Prevention and Response  
Alameda Co, Layout 004



CONAGRA Flour  
Milling Company,  
Line No. 4

Sea Power  
Marine,  
Line No. 5

Pier 29  
Restaurant,  
Line No. 26

Tidewater Sand  
& Gravel,  
Line No. 2

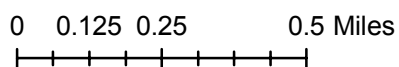
Stone  
Boat Yard,  
Line No. 3

DUTRA  
Construction,  
Line No. 6

Aeolian  
Yacht Club,  
Line No. 64

Martin Luther King Jr.  
Regional Shoreline,  
Line No. 81

San Leandro Bay  
Regional Shoreline,  
Line No. 34

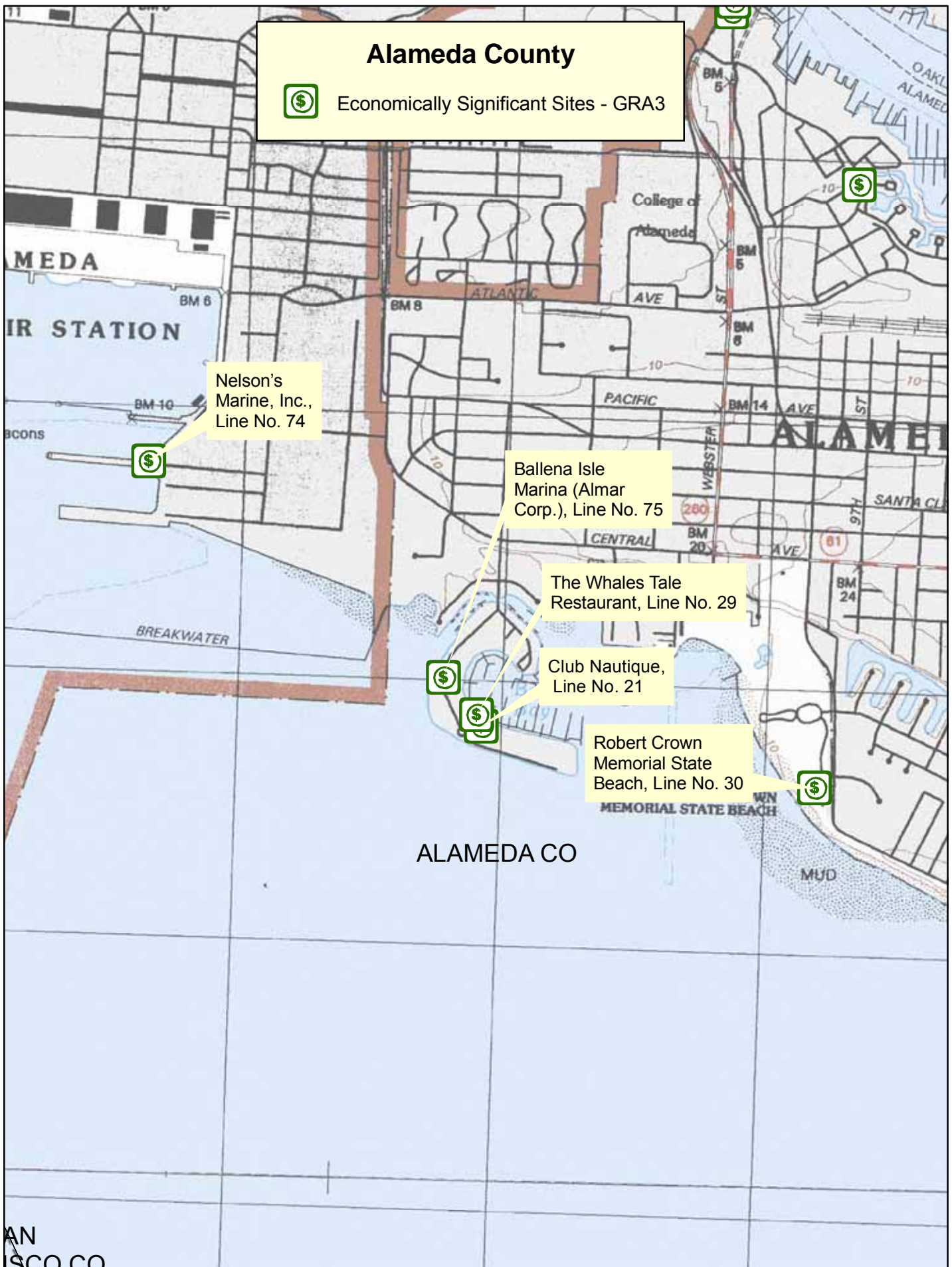


California Department of Fish and Game  
Office of Spill Prevention and Response  
Alameda Co, Layout 005

# Alameda County



Economically Significant Sites - GRA3



0 0.125 0.25 0.5 Miles



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Office of Spill Prevention and Response  
Alameda Co, Layout 011

### Economically Significant Sites - GRA3

San Leandro  
Marina,  
Line No. 83

**San Leandro  
Marina**

**Mafford  
Gardens**

MUD

CORPORATE  
CORPORATE

Marina

ROAD ON LEVEE

ROAD ON LEVEE

Golf Course

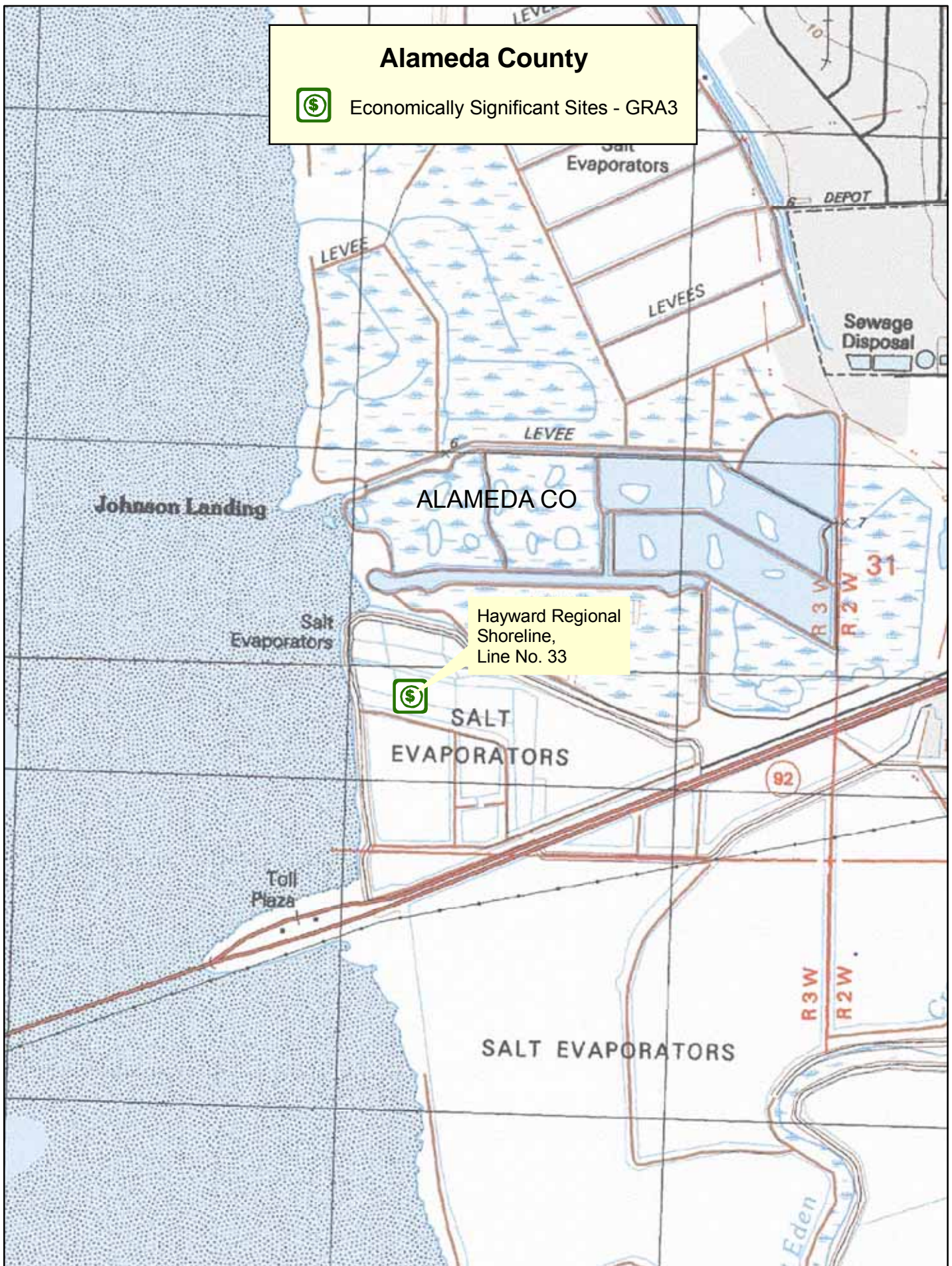
ROAD QI

California Department of Fish and Game  
Office of Spill Prevention and Response  
Alameda Co, Layout 012

# Alameda County



Economically Significant Sites - GRA3



0 0.125 0.25 0.5 Miles



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Office of Spill Prevention and Response  
Alameda Co, Layout 006

## Alameda/Santa Clara County



Economically Significant Sites - GRA3

Coyote Hills  
Regional Park,  
Line No. 32



San Francisco Bay  
National Wildlife  
Refuge, Line No. 31



Menlo Park Shoreline,  
Ravenswood Slough, Cooley  
Landing Marsh, Line No. 57



SAN  
MATEO CO

Byxbee Park  
(Baylands Nature  
Preserve), Line No. 63



Palo Alto Airport,  
Line No. 58

Shoreline  
Park, Line  
No. 62



Sunnyvale  
Baylands County  
Park, Line No. 61



San Francisco Bay  
National Wildlife Refuge,  
Alviso Unit, Line No. 59

South Bay  
Yacht Club,  
Line No. 84



SANTA  
CLARA CO

Alviso Marina  
Park, Line No. 60

0 0.5 1 2 3 Miles



California Department of Fish and Game  
Office of Spill Prevention and Response  
Alameda/Santa Clara Co, Layout 007

## San Francisco County



Economically Significant Sites - GRA3

Pier 38  
MRC, Inc.,  
Line No. 85

South Beach Harbor,  
Line No. 35

China Basin,  
Line No. 36

SAN  
FRANCISCO CO

Pier 80  
North, Line  
No. 37

Pier 96  
South, Line  
No. 38

Pier 98,  
Line No. 39

SAN FRANCISCO

0 0.25 0.5 1 Miles



California Department of Fish and Game  
Office of Spill Prevention and Response  
San Francisco Co, Layout 010



# San Mateo County

Economically Significant Sites - GRA3

Brisbane Shoreline and Lagoon, Line No. 40

Brisbane Marina, Line No. 41

SAN MATEO CO

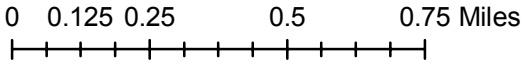
Oyster Cove Marina, Line No. 42

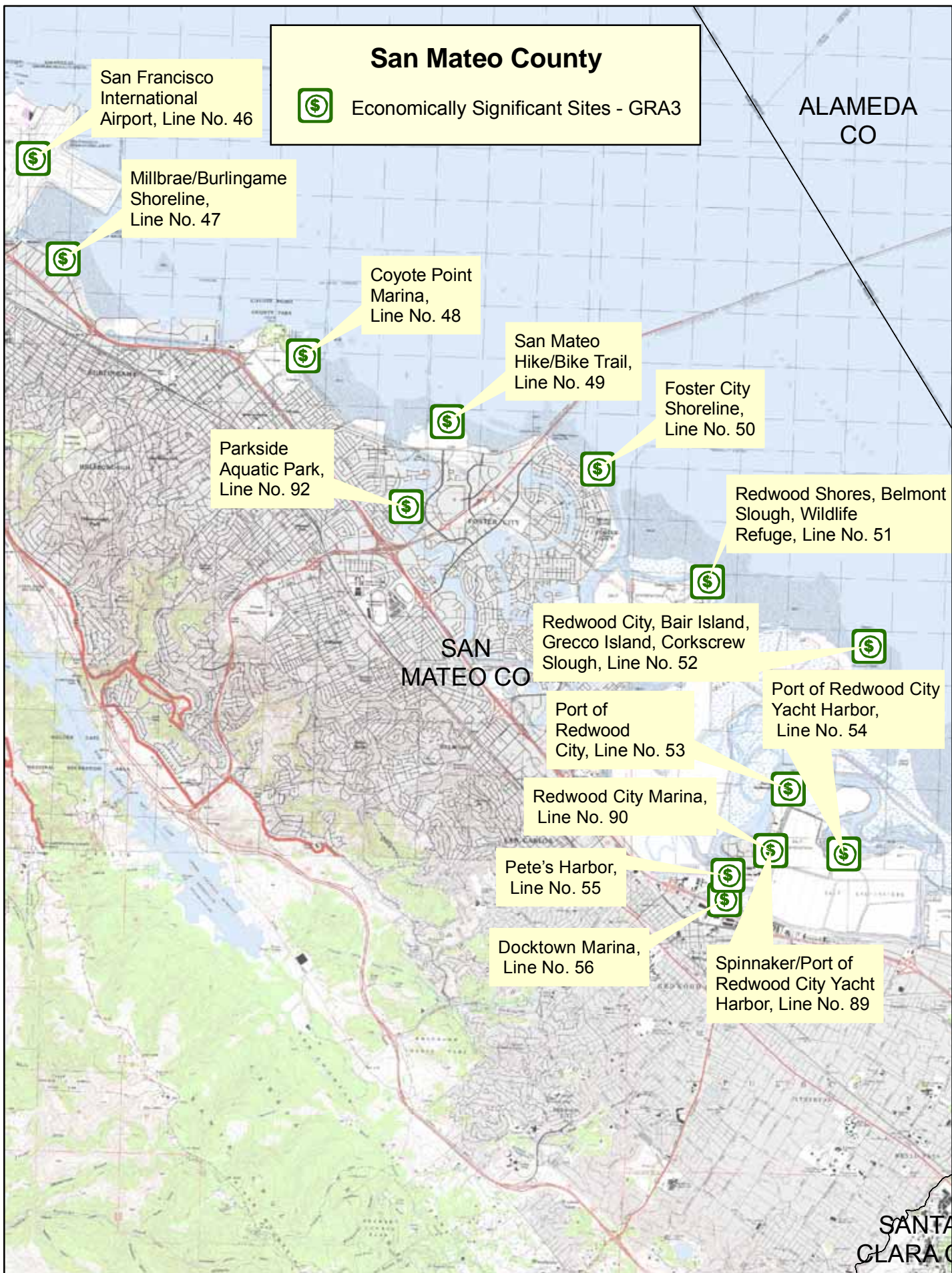
Oyster Point Marina, Line No. 43

Marine Collection, Line No. 96

South San Francisco Shoreline, Line No. 44

San Bruno Canal, Line No. 45





0 0.5 1 2 3 Miles



California Department of Fish and Game  
Office of Spill Prevention and Response  
San Mateo Co, Layout 008

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#### **9843.4 Shoreline Operational Divisions**

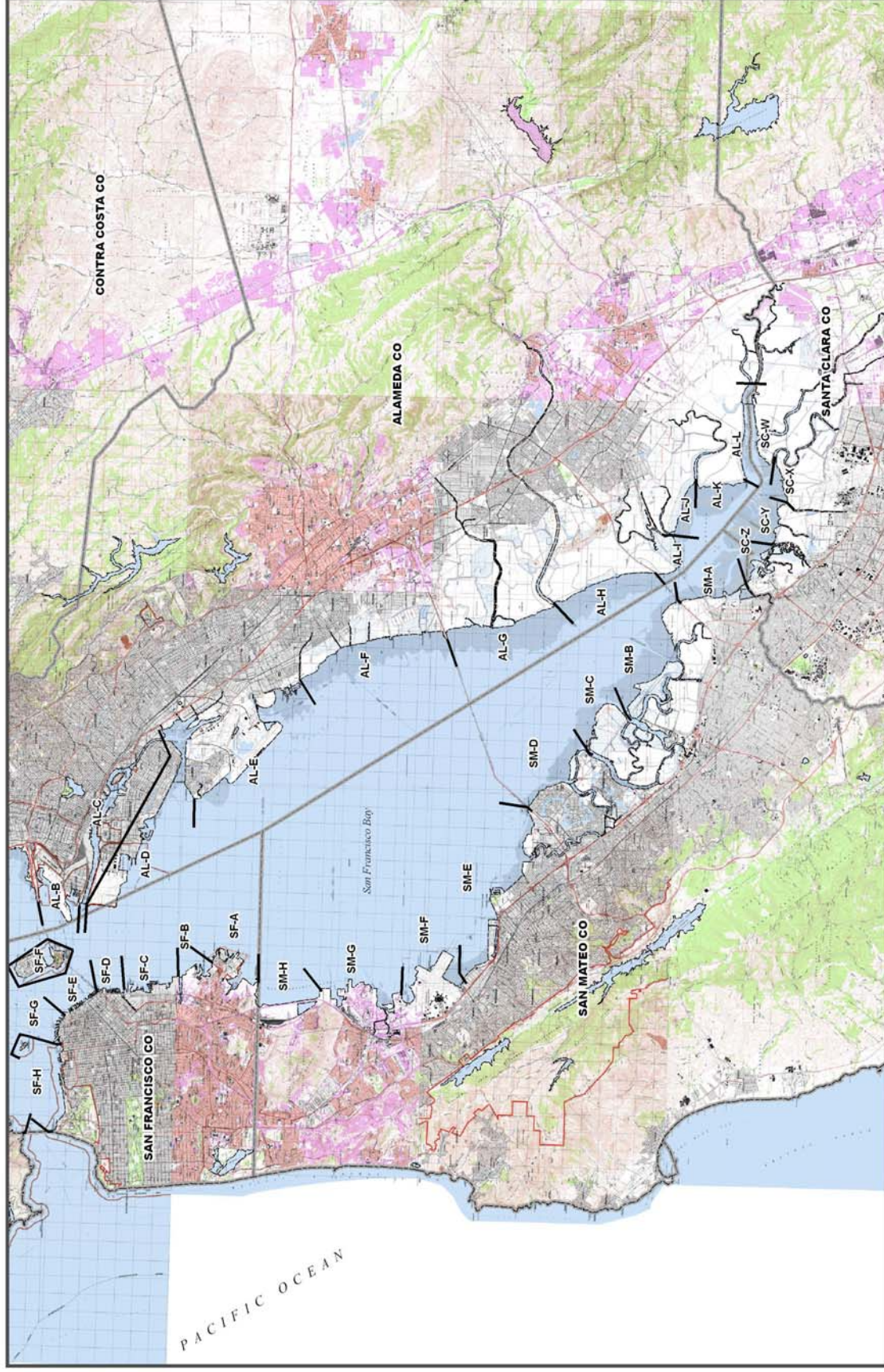
Shoreline Operational Divisions are presented in the ACP as front-loaded information to assist in rapid response planning to provide for quickly organized operational objectives and assignments along affected shorelines. The operational divisions have been developed in conjunction with the US Coast Guard, California Fish and Game OSPR, and various Oil Spill Response Organizations. Experience has demonstrated that in the earliest stages of spill response having organizational issues such as this prepared in advance is very useful to the response team.

The shoreline operational divisions are organized and named according to County boundaries. Within county domains, divisions and boundaries are guided by logical geo-political features such as coastal physical characteristics and land ownership/management issues, shoreline cleanup logistical considerations, and manageable sized coastline segments (generally not longer than about ten miles although some variation occurs.) Logistics, access, and manageability were driving considerations in this effort, particularly as it relates to types of cleanup operations required and problems likely to be present.

In ACP areas having more than one county, Shoreline Operational Divisions will utilize county codes followed by a single alpha character (A to Z). Shoreline operational divisions are labeled from north to south in each county. For example, the north-most operational division in Los Angeles County is "LA-A." In large bays (i.e. San Diego), the labeling will progress in a clockwise direction to accommodate changing coastline angles. Divisions can be easily subdivided (as necessary) by the Operations Section management to provide for appropriate work assignment effort.

Double digit alpha characters (AA to ZZ) will be used for all offshore operational areas and any other special operational areas needed during response.

# 9843.4 Shoreline Operational Divisions for GRA 3, South Bay

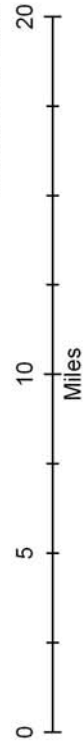


**Legend**

— Division Line

**DRAFT**

Source: C. Jochums



## 9843.5 Shoreline Access

Detailed shoreline access information is provided in this section to aid Planning and Operations Section managers in rapid placement of field response personnel and equipment on coastal beaches during the emergency phase of spill response. Coastal access points were examined, mapped and photographed at virtually every location along the respective ACP coastline where personnel and equipment can gain access to specific coastal segments. Used in conjunction with Environmentally Sensitive Sites and Operational Divisions, shoreline access information enables responders to be directed to the most convenient or appropriate coastal access point for their response effort. Knowing which access point to use and the nature of any access limitation will reduce time delays in finding these locations and eliminate uncertainties about the type of equipment that can gain access. Information provided in this section includes:

- a) descriptive information about the respective operational division with boundaries defined by landmark features and latitude/longitude (GPS), and a general description of recognized cultural resource issues, sensitive sites within divisions; and
- b) access point specific *Thomas Bros Maps*® page and coordinates, written directions from major streets and roads, a general site description, photographs of entry points and associated shoreline, land ownership matters, and occurrence of Sensitive Sites. Descriptions may also include the length of accessed coastal segment and limitations of access where physical constraints may be a factor.

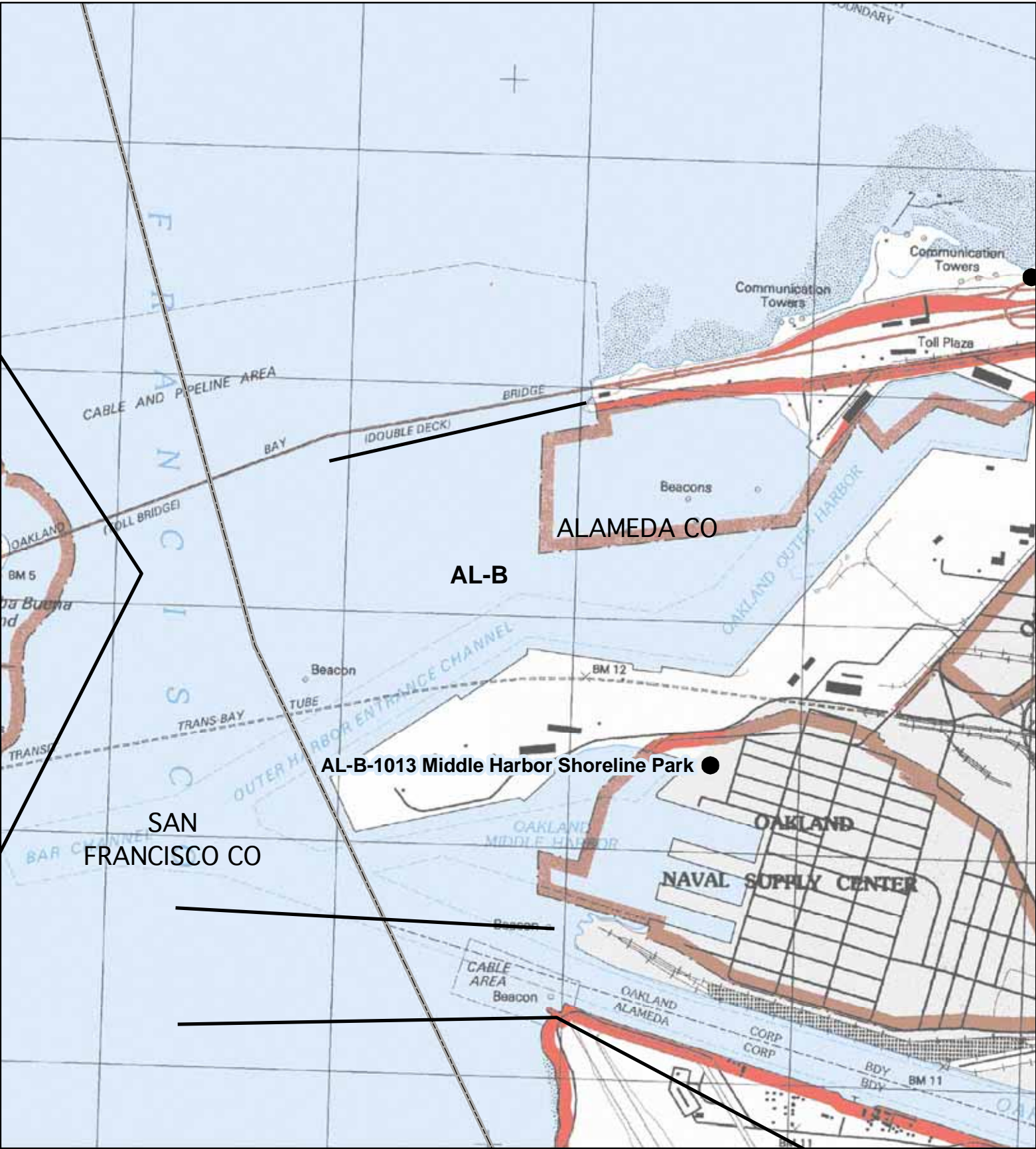
The access point identification label is a seven character alpha-numeric code describing (in order) the County (2-alpha characters) and Operational Division (1-alpha character) where the access point is located, along with a four digit number that relates to its relative physical location in the operational division. Thus, in each operational division the unit digit component will increase from north to south as access points are encountered that provide access to a discrete (partial) coastal segment of the operational division (i.e. 1110, 1115, 1120, etc.). The access point alpha-numeric code will be followed by a name the site is commonly known by (i.e. Nicholas Canyon County Beach).

Access points are labeled from north to south within an operational division. Where segments occur within an operational division they are designated by the thousands digit of the code (i.e. 1000, 2000, 3000, etc.). An access point within a segment is identified by the tenths digit (i.e. 1010, 1020, and 1030), in this example segment one has three access points. Or, there can be multiple isolated shorelines (segments) each with only one access point (i.e. 1010, 2010, 3010, etc).

In contrast, an operational division with clear, unimpeded access for its entire length may have several access points identified by the hundreds digit (i.e. 1100, 1200, 1300, 1400). In this example the operational division (1000 – which can be thought of as one large segment) is accessible from four access points with no physical barriers preventing movement along its entire length. Responders can enter at any access point, and exit again at any other (providing the pathway will accommodate the equipment). In any given operational division shoreline ownership/management may change. The unit digit of the four digit code reflects that condition (i.e. 1108, 4016, 3011, etc). Higher numbers indicate more difficult access issues. Military lands are identified by the number 9,

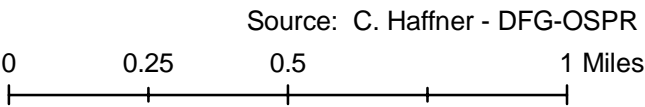
Federal lands such as National Parks, National Monuments, National Wildlife Refuges, etc. are identified by the number 8, Tribal lands are identified with the number 7, State Lands such as State Parks, State Beaches, etc. are identified by the number 6, and County lands are identified by the number 5. Properties of cities are labeled with 4. The number 1 identifies private property, while 0 indicates that the ownership is not known. The numbers 3 and 2 are currently not assigned.

# Alameda County, Division B - Access Names



## Legend

- Access Names
- Division Lines



## Operational Divisions and Access Points in GRA 3

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**AL Division B**

**County** Alameda

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### Division Boundaries

<b>North</b>	Bay Bridge	<b>Latitude: N</b> 37.82122	<b>Longitude: W</b> 122.33017
<b>South</b>	Oakland Naval Supply Center	<b>Latitude: N</b> 37.79938	<b>Longitude: W</b> 122.33011

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### Division Description

Division is located south of Bay Bridge and contains Oakland Outer Harbor and Oakland Inner Harbor. Shoreline is in an industrial area.

### Cultural Information

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**Sensitive Sites Within Division:** 2-304-A Middle Harbor Shoreline Park

### Individual Access Points in: AL Division B

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**Access Point:** AL - B - 1013 Middle Harbor Shoreline Park

**Thomas Guide Page:** 329 **Grid:** B4 **City:** Oakland

**GPS Coordinates:** N 37.80659 W 122.32392 **USGS Quad:** Oakland West

#### **Directions:**

From Highway 880: take 7th Street exit to the end. Park is on the left side.

#### **Site Description:**

Historical site. Building 122 turned into Shoreline Park. East Bay Regional Park District land. Park located in a cove. Northern shoreline of cove lined with rip-rap, eastern shoreline is lined by boardwalk/pier pilings. South side of park has sandy beach area with vegetated dunes. Mudflats present at low tides.

**Sensitive Sites:** 2-304-A



**AL-B-1013 Middle Harbor Shoreline Park.** View of northern shore of cove.



**AL-B-1013 Middle Harbor Shoreline Park.** View of eastern edge of cove.

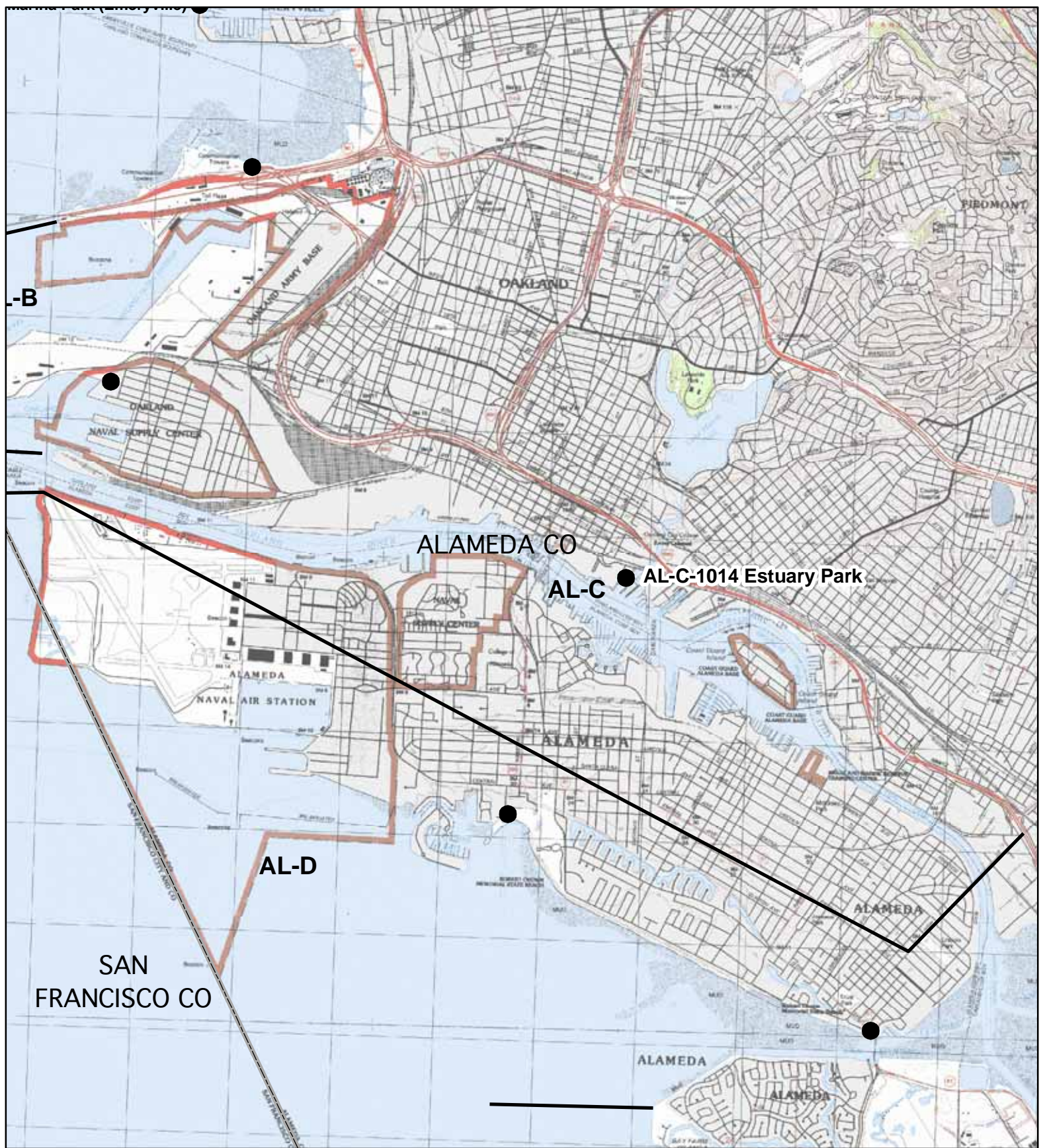


**AL-B-1013 Middle Harbor Shoreline Park.** View of southern pocket beach.



**AL-B-1013 Middle Harbor Shoreline Park.** Parking area.

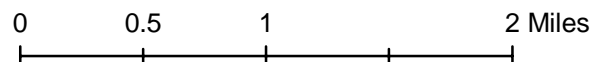
## Alameda County, Division C - Access Names



## Legend

- Access Names  
— Division Lines

Source: C. Haffner - DFG-OSPR



## Operational Divisions and Access Points in GRA 3

**AL Division C**

**County** Alameda

### Division Boundaries

<b>North</b>	Oakland Naval Supply Center	<b>Latitude: N</b> 37.79938	<b>Longitude: W</b> 122.33011
<b>South</b>	High Street	<b>Latitude: N</b> 37.76438	<b>Longitude: W</b> 122.22491

### Division Description

Division encompasses the Oakland Inner Harbor, it's associated tidal canal, and Coast Guard Island. The waterway is lined by many marinas and man-made structures.

### Cultural Information

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

### Sensitive Sites Within Division:

### Individual Access Points in: AL Division C

**Access Point:** AL - C - 1014 Estuary Park

**Thomas Guide Page:** 330 **Grid:** A7 **City:** Oakland

**GPS Coordinates:** N 37.7902 W 122.2655 **USGS Quad:** Oakland West

#### **Directions:**

From Highway 880: exit 16th Ave. Right on Embarcadero toward Jack London Aquatic Center.

#### **Site Description:**

Shoreline lined by rip-rap. Channel lined by man-made structures (marinas, piers, etc.). Site is adjacent to Lake Merritt outfall.

#### **Sensitive Sites:**



**AL-C-1014 Estuary Park.** Looking west.



**AL-C-1014 Estuary Park.** Looking east.

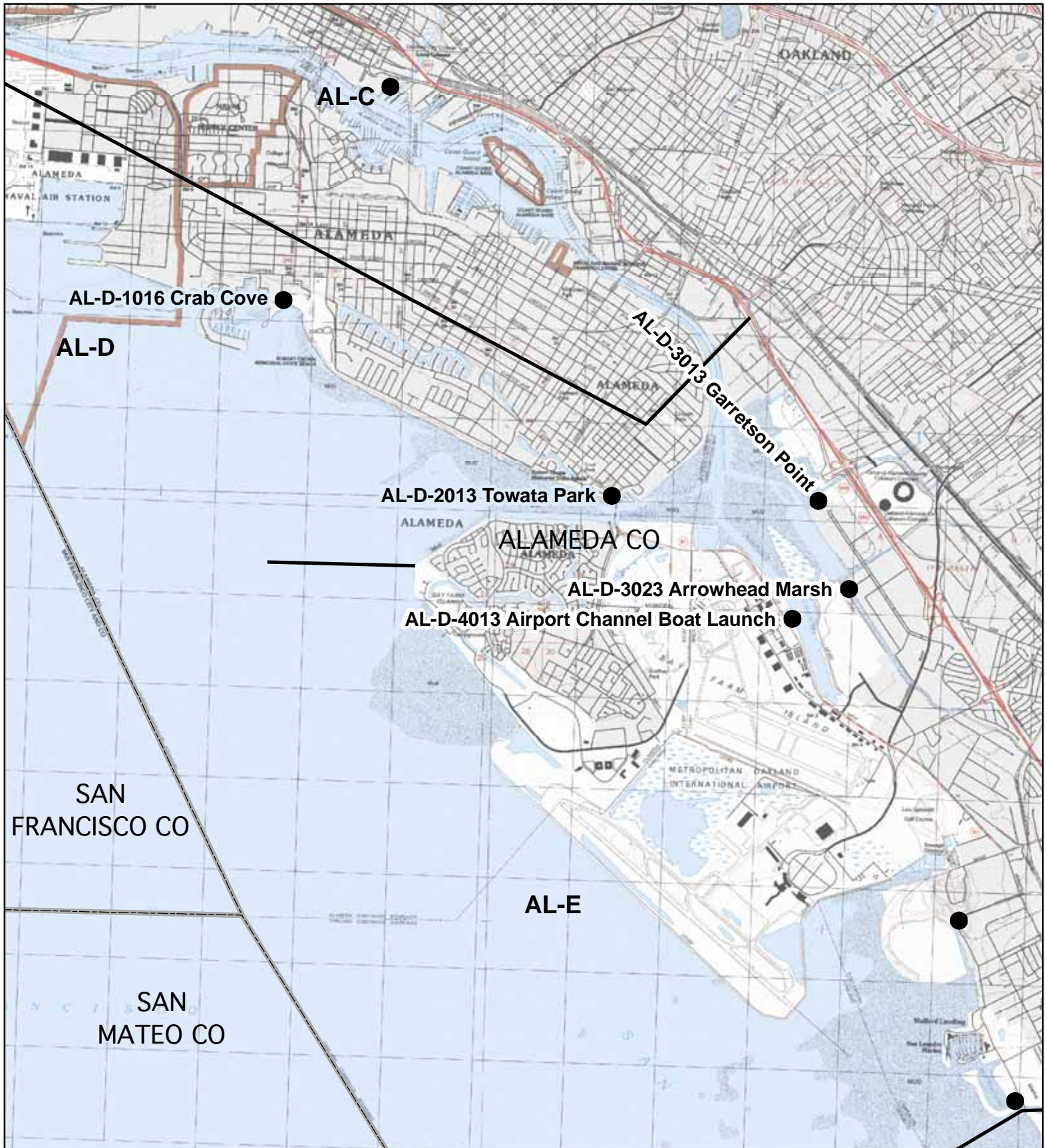


**AL-C-1014 Estuary Park.** Lake Merritt outfall on eastern edge of site.



**AL-C-1014 Estuary Park.** Parking area.

# Alameda County, Division D - Access Names



## Legend

● Access Names

— Division Lines

Source: C. Haffner - DFG-OSPR

0 0.5 1 2 Miles

## Operational Divisions and Access Points in GRA 3

**AL Division D**

**County** Alameda

### Division Boundaries

<b>North</b>	Alameda Naval Air Station	<b>Latitude: N</b> 37.79708	<b>Longitude: W</b> 122.33079
<b>South</b>	Bay Farm Island	<b>Latitude: N</b> 37.74322	<b>Longitude: W</b> 122.2609

### Division Description

This division includes all of San Leandro Bay and the San Leandro Channel, including Elsie Roemer Bird Sanctuary. This shallow bay between Alameda and Bay Farm Islands has extensive mudflats and well developed saltmarsh, including the 50-acre Arrowhead Marsh at the south end. The west and south margins are part of San Leandro Bay Regional Shoreline - EBRP. The Oakland Estuary feeds into the north end, and San Leandro Channel feeds in from the west. San Leandro Creek empties to the bay at its southeast corner. The Robert Crown Memorial State Beach makes up a large portion of the division's shoreline.

### Cultural Information

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**Sensitive Sites Within Division:** [2-307-C/A](#) Alameda Eelgrass Beds  
[2-309-A](#) San Leandro Bay

### Individual Access Points in: AL Division D

#### Access Point: AL - D - 1016 Crab Cove

**Thomas Guide Page:** 329 **Grid:** G10 **City:** Alameda

**GPS Coordinates:** N 37.76894 W 122.27814 **USGS Quad:** Oakland West

#### Directions:

From Highway 880: take W-260 thru tunnel. Right on 61. Take first left on McKay Ave. to the entrance of park.

#### Site Description:

Rip-rapped areas of shoreline with interspersed fine grained sandy beaches, typically backed by boulders/rip rap. Area is part of the Robert Crown Memorial State Beach, which stretches most of the division and has several areas where shoreline can be accessed. Large parking area w/~50 spaces.

#### Sensitive Sites:

#### Access Point: AL - D - 2013 Towata Park

**Thomas Guide Page:** 250 **Grid:** B2 **City:** Alameda

**GPS Coordinates:** N 37.75044 W 122.23679 **USGS Quad:** Oakland East

#### Directions:

From Highway 880: take High Street exit. Head west to Otis Ave. Right on Bridge View to parking area.

#### Site Description:

Marsh shoreline (made-up of pickleweed, spartina, etc) backed by rip-rap. Paved walkway runs parallel to water. Channel leads to San Leandro Bay. The west and south margins are part of San Leandro Bay Regional Shoreline - EBRPD.

**Sensitive Sites:** [2-309-A](#)

## Operational Divisions and Access Points in GRA 3

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### Access Point: AL - D - 3013 Garretson Point

**Thomas Guide Page:** 331     **Grid:** C2     **City:** Oakland

**GPS Coordinates:** N 37.7504     W 122.21109     **USGS Quad:** San Leandro

#### **Directions:**

From Hwy 880: take 66 Ave./Zhone Way exit. Right on Zhone. Left on Oakport. Right on Hassler. Right on Edgewater and continue to the park's entrance.

#### **Site Description:**

Damon Marsh and Damon Slough are just north of the parking area. Shoreline primarily made of of rip-rap (south of Damon Marsh). Paved trail runs from East Creek Point to fishing dock off of Doolittle Drive (~2.75 miles). Additional parking areas off of Tidewater Ave. and Zhone Way. Part of Martin Luther King, Jr. Regional Shoreline (EBRPD).

**Sensitive Sites:** [2-309-A](#)

### Access Point: AL - D - 3023 Arrowhead Marsh

**Thomas Guide Page:** 331     **Grid:** C3     **City:** Oakland

**GPS Coordinates:** N 37.74183     W 122.20704     **USGS Quad:** San Leandro

#### **Directions:**

From Hwy 880: take Hegenberger Road exit. Right on Pardee Drive. Left on Swan Way. Right on Frontage Road.

#### **Site Description:**

Shoreline composed of an extensive marsh restoration project. Marsh area utilized by a wide variety of water birds. San Leandro Creek located on the southeastern portion of site. Paved trail runs from East Creek Point to fishing dock off of Doolittle Drive (~2.75 miles). Additional parking areas off of Tidewater Ave. and Zhone Way. Part of Martin Luther King, Jr. Regional Shoreline (EBRPD).

**Sensitive Sites:** [2-309-A](#)

### Access Point: AL - D - 4013 Airport Channel Boat Launch

**Thomas Guide Page:** 331     **Grid:** C4     **City:** Oakland

**GPS Coordinates:** N 37.73874     W 122.21398     **USGS Quad:** San Leandro

#### **Directions:**

From Hwy 880: take Hegenberger Road exit. Right on Doolittle. Just east of Oakland International Airport.

#### **Site Description:**

Site west of Arrowhead Marsh. Shoreline consists of marsh vegetation (i.e. cordgrass, pickleweed, etc.). Parking at north and south ends of site. Part of the Martin Luther King, Jr. Regional Shoreline (EBRPD).

**Sensitive Sites:** [2-309-A](#)



**AL-D-1016 Crab Cove. View of cove.**



**AL-D-1016 Crab Cove. Parking area.**



**AL-D-2013 Towata Park. Looking west.**



**AL-D-2013 Towata Park. Looking east.**



**AL-D-2013 Towata Park.** Parking area.



**AL-D-3013 Garretson Point.** Looking north toward Damon Marsh.



**AL-D-3013 Garretson Point.** Looking east toward Damon Slough.



**AL-D-3013 Garretson Point.** Looking west toward Arrowhead Marsh.



**AL-D-3013 Garretson Point.** Parking area.



**AL-D-3023 Arrowhead Marsh.** Looking east.



**AL-D-3023 Arrowhead Marsh.** Looking west.



**AL-D-4013 Airport Channel Boat Launch. View north.**



**AL-D-4013 Airport Channel Boat Launch. View south.**



**AL-D-4013 Airport Channel Boat Launch.** Boat launch area.



**AL-D-4013 Airport Channel Boat Launch.** Parking area.

# Alameda County, Division E - Access Names



**Legend**

- Access Names
- Division Lines

Source: C. Haffner - DFG-OSPR

0 0.5 1 2 Miles

## Operational Divisions and Access Points in GRA 3

**AL Division E**

**County Alameda**

### Division Boundaries

<b>North</b>	Bay Farm Island	<b>Latitude: N</b> 37.74322	<b>Longitude: W</b> 122.2609
<b>South</b>	Estadillo Canal	<b>Latitude: N</b> 37.69102	<b>Longitude: W</b> 122.1833

### Division Description

Oakland International Airport property makes up a large portion of this division. Shallow mudflats are present off of Bay Farm Island (in the north) and Oyster Bay (in the South).

### Cultural Information

There are probably historic and cultural sites present. For specific information on historic or cultural resources in this area, contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-2494).

**Sensitive Sites Within Division:** [2-310-C/A](#) Bay Farm Island Eel Grass Beds  
[2-312-A](#) Oyster Bay Marshes

### Individual Access Points in: AL Division E

#### Access Point: AL - E - 1013 Oyster Park

**Thomas Guide Page:** 331 **Grid:** E8 **City:** San Leandro

**GPS Coordinates:** N 37.70943 W 122.19242 **USGS Quad:** San Leandro

#### Directions:

From Hwy 880: take Hegenberger Road exit. Left on Doolittle. Right on Williams. Right on Neptune and proceed to the end.

#### Site Description:

Most of shoreline is rip-rapped. Northern portion of site is lined by marsh vegetation. Shallow mudflats lie just offshore to the south. Contact EBRPD to gain vehicle access to shoreline. Additional access is located off of Davis St. adjacent to landfill.

**Sensitive Sites:** [2-312-A](#)

#### Access Point: AL - E - 2014 Marina Park (SL)

**Thomas Guide Page:** 331 **Grid:** F10 **City:** San Leandro

**GPS Coordinates:** N 37.6918 W 122.18494 **USGS Quad:** San Leandro

#### Directions:

From Hwy 880: take Marina Blvd. exit. Left on Neptune and continue to Marina Park.

#### Site Description:

Shoreline made up of primarily of rip-rap. Paved path runs from south of the San Leandro Marina to Robert's Landing (~2 miles). Path backed by Bunker, Citiation, East, and North Marshes. Several water control structures along path allow water exchange from Bay to marshes. EBRPD property.

**Sensitive Sites:** [2-315-A](#)



**AL-E-1013 Oyster Park.** Shoreline looking south.



**AL-E-1013 Oyster Park.** Access.

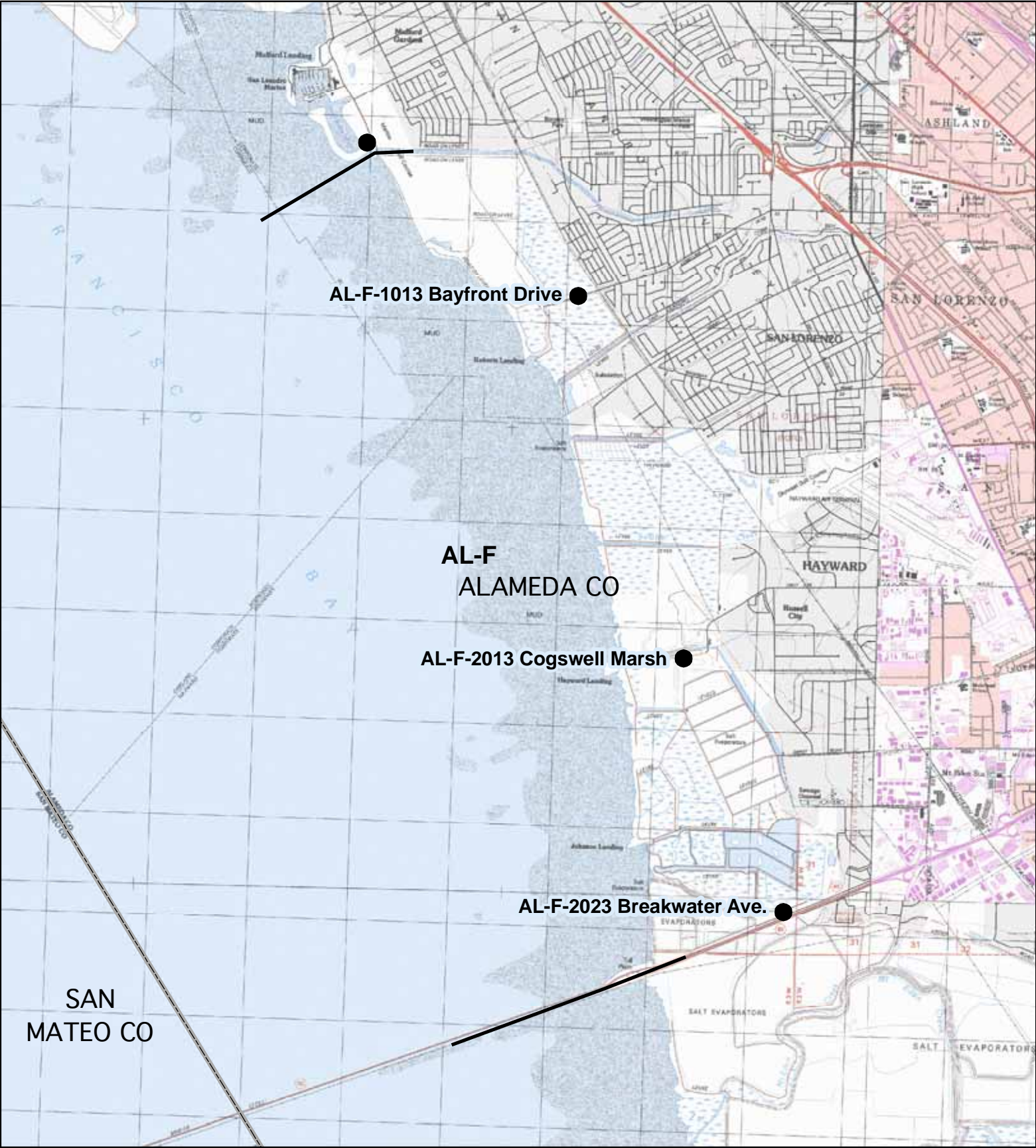


**AL-E-2014 Marina Park.** Looking south across Estudillo Canal.



**AL-E-2014 Marina Park.** Access to path, looking south.

# Alameda County, Division F - Access Names



## Legend

- Access Names
- Division Lines

Source: C. Haffner - DFG-OSPR

0 0.5 1 2 Miles

## Operational Divisions and Access Points in GRA 3

**AL Division F**

**County Alameda**

### Division Boundaries

<b>North</b>	Estudillo Canal	<b>Latitude: N</b>	37.69102	<b>Longitude: W</b>	122.1833
<b>South</b>	San Mateo-Hayward Bridge	<b>Latitude: N</b>	37.61668	<b>Longitude: W</b>	122.15599

### Division Description

Division stretches from Estudillo Canal to Highway 92 (San Mateo-Hayward Bridge). Several tidal inlets occur along the shoreline. Shoreline is composed of stretches of rip-rap mixed with stretches marshy vegetation.

### Cultural Information

Ohlone cultural sites may be nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880), for specific information on historic or cultural resources in this area.

**Sensitive Sites Within Division:** [2-315-A](#) San Lorenzo Creek, Bunker and North Marshes  
[2-320-A](#) Oro Loma Marshes  
[2-324-A](#) Cogswell, Hayward, and HARD Marshes

### Individual Access Points in: AL Division F

#### Access Point: AL - F - 1013 Bayfront Drive

**Thomas Guide Page:** 250 **Grid:** C4 **City:** San Leandro

**GPS Coordinates:** N 37.67848 W 122.16066 **USGS Quad:** San Leandro

#### Directions:

From Highway 880: take Marina Blvd. exit west. Left on Merced St. Merced St. forks - veer right onto Wicks Blvd. Right on Lewelling Blvd. Proceed straight. Lewelling turns into Bayfront. Path to Bay at the end of Bayfront.

#### Site Description:

Path leads to shoreline. Shoreline consists of marsh vegetation with areas of rip-rap. Path leads to Robert's Landing. Bunker Marsh, Citation Marsh and East Marsh lay directly behind the levee. Parking along street. Access to shoreline can also be from Marina Park (near San Lorenzo Marina). Part of EBRPD.

**Sensitive Sites:** [2-315-A](#)

#### Access Point: AL - F - 2013 Cogswell Marsh

**Thomas Guide Page:** 250 **Grid:** C4 **City:** Hayward

**GPS Coordinates:** N 37.64621 W 122.1478 **USGS Quad:** San Leandro

#### Directions:

From Hwy 880: take Winton Ave. exit. Head west to end of the road.

#### Site Description:

Extensive marsh area with tidally influenced channels. Shoreline lined with rip-rap and has various tidal inlets. Part of Hayward Regional Shoreline - EBRPD. Locked gates at various positions, call Park Office (510) 783-1066 for assistance.

**Sensitive Sites:** [2-320-A](#)

## Operational Divisions and Access Points in GRA 3

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**Access Point:** AL - F - 2023 Breakwater Ave.

**Thomas Guide Page:** 250      **Grid:** C5      **City:** Hayward

**GPS Coordinates:** N 37.62365      W 122.13586      **USGS Quad:** San Leandro

***Directions:***

From Hwy 880: take W-92. Take Clawiter exit. Left on Breakwater to Hayward Shoreline Interpretive Center.

***Site Description:***

Shoreline made up of tidally influenced channels and rip-rap. An ~2.5 mile path extends from Breakwater Ave. to Cogswell Marsh Park office. Part of Hayward Regional Shoreline - EBRPD. Locked gates at various positions, call Park Office (510) 783-1066 for assistance.

***Sensitive Sites:*** [2-320-A](#)



**AL-F-1013 Bayfront Drive.** Looking south toward Bunker and East Marsh.



**AL-F-1013 Bayfront Drive.** Shoreline north of path.



**AL-F-2013 Cogswell Marsh.** View north toward Hayward's Landing.



**AL-F-2013 Cogswell Marsh.** Tidal inlet into Cogswell Marsh.

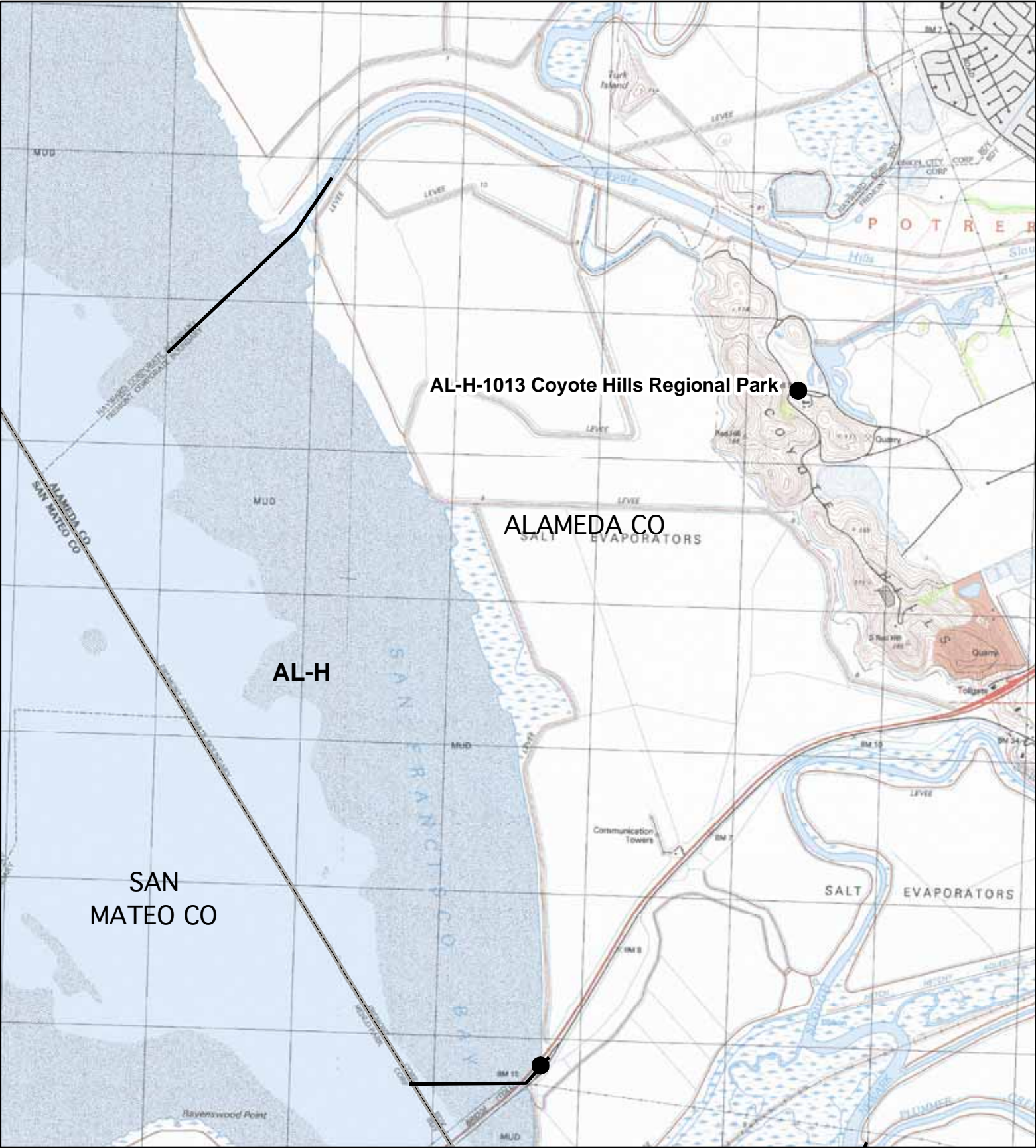


**AL-F-2013 Cogswell Marsh. Parking area.**



**AL-F-2013 Cogswell Marsh. Path to shoreline.**

# Alameda County, Division H - Access Names



AL-H-1013 Coyote Hills Regional Park

ALAMEDA CO

AL-H

SAN  
MATEO CO



## Legend

- Access Names
- Division Lines

Source: C. Haffner - DFG-OSPR

0 0.5 1 Miles

## Operational Divisions and Access Points in GRA 3

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**AL Division H**

**County** Alameda

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### Division Boundaries

<b>North</b>	Coyote Hills Slough	<b>Latitude: N</b> 37.56204	<b>Longitude: W</b> 122.13192
<b>South</b>	Dumbarton Bridge	<b>Latitude: N</b> 37.5116	<b>Longitude: W</b> 122.11092

---

### Division Description

The division consists of a large contiguous section of marsh located along the east side of south San Francisco Bay. The marsh is surrounded by Cargill salt ponds on three sides and is part of the Don Edwards San Francisco Bay National Wildlife Refuge. Mudflats extend out towards the Bay 1000's of feet from the shore. Shoreline access in division is difficult.

### Cultural Information

Ohlone cultural sites are nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**Sensitive Sites Within Division:** [2-328-A](#) Ideal and USFWS N-5 Marshes

### Individual Access Points in: AL Division H

---

**Access Point:** AL - H - 1013 Coyote Hills Regional Park

**Thomas Guide Page:** 250 **Grid:** C4 **City:** Newark

**GPS Coordinates:** N 37.55386 W 122.09135 **USGS Quad:** Newark

#### **Directions:**

From Highway 880: Take W-84 exit. Exit Paseo Padre Parkway. Proceed north. Left on Petterson Ranch. Proceed to parking area.

#### **Site Description:**

Good observation point for the SE portion of the Bay. Shoreline is made up of diked salt ponds. Possible shoreline access along Alameda Creek Regional Trail and No Name Trail. Trails subject to closure. Managed wetlands along Alameda Creek. Part of EBRPD. Site is adjacent to Don Edwards National Wildlife Refuge.

**Sensitive Sites:** [2-328-A](#)

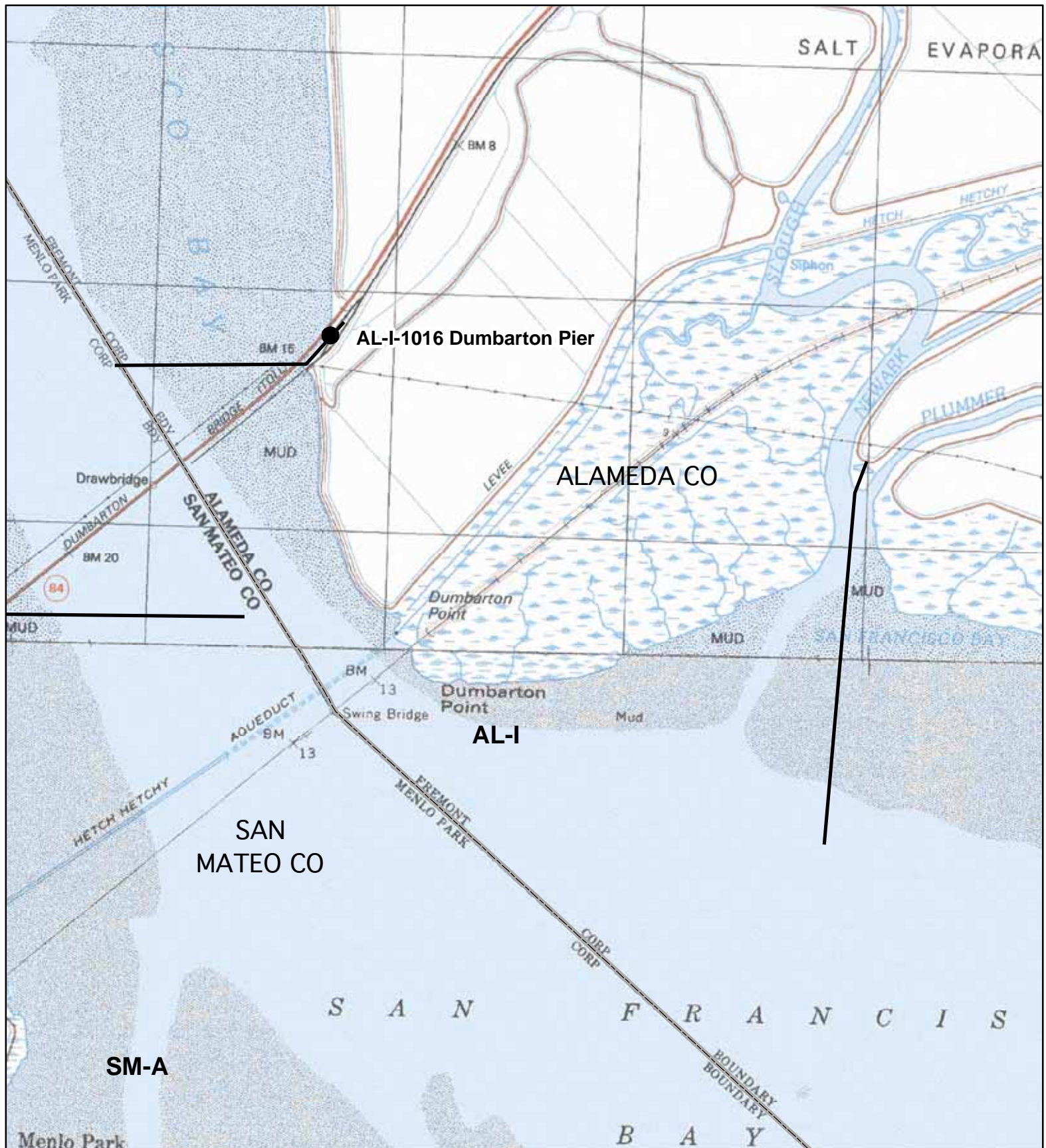


**AL-H-1013 Coyote Hills Regional Park.** Looking west towards Bay.



**AL-H-1013 Coyote Hills Regional Park.** Access to paved trail.

# Alameda County, Division I - Access Names



## Legend

● Access Names

— Division Lines

Source: C. Haffner - DFG-OSPR

0 0.25 0.5 1 Miles

## Operational Divisions and Access Points in GRA 3

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**AL Division I**

**County** Alameda

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### Division Boundaries

<b>North</b>	Dumbarton Bridge	<b>Latitude: N</b> 37.5116	<b>Longitude: W</b> 122.11092
<b>South</b>	Newark Slough	<b>Latitude: N</b> 37.49791	<b>Longitude: W</b> 122.09042

---

### Division Description

This division is made up of a large contiguous marsh with many primary slough channels entering from its southern shore. There is a wild mudflat between the main channel of the bay and the marsh. This division is part of the San Francisco Bay National Wildlife Refuge.

### Cultural Information

Ohlone cultural sites are nearby. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**Sensitive Sites Within Division:** [2-340-A](#) Dumbarton Point Marsh/Mudflat

### Individual Access Points in: AL Division I

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**Access Point:** AL - I - 1016 Dumbarton Pier

**Thomas Guide Page:** 250 **Grid:** C7 **City:** Newark

**GPS Coordinates:** N 37.51171 W 122.11028 **USGS Quad:** Newark

#### **Directions:**

From Hwy 880: take W-84 exit. Take Thorton Ave. exit. Turn south. Right on Marshlands Road and proceed to end.

#### **Site Description:**

Small coarse-grained sandy beach on the northside of site. Rip-rap lines western edge of site. Levee road runs adjacent to Bay. Contact Don Edwards-NWR to unlock levee gates (510) 792-0222.

**Sensitive Sites:** [2-340-A](#)

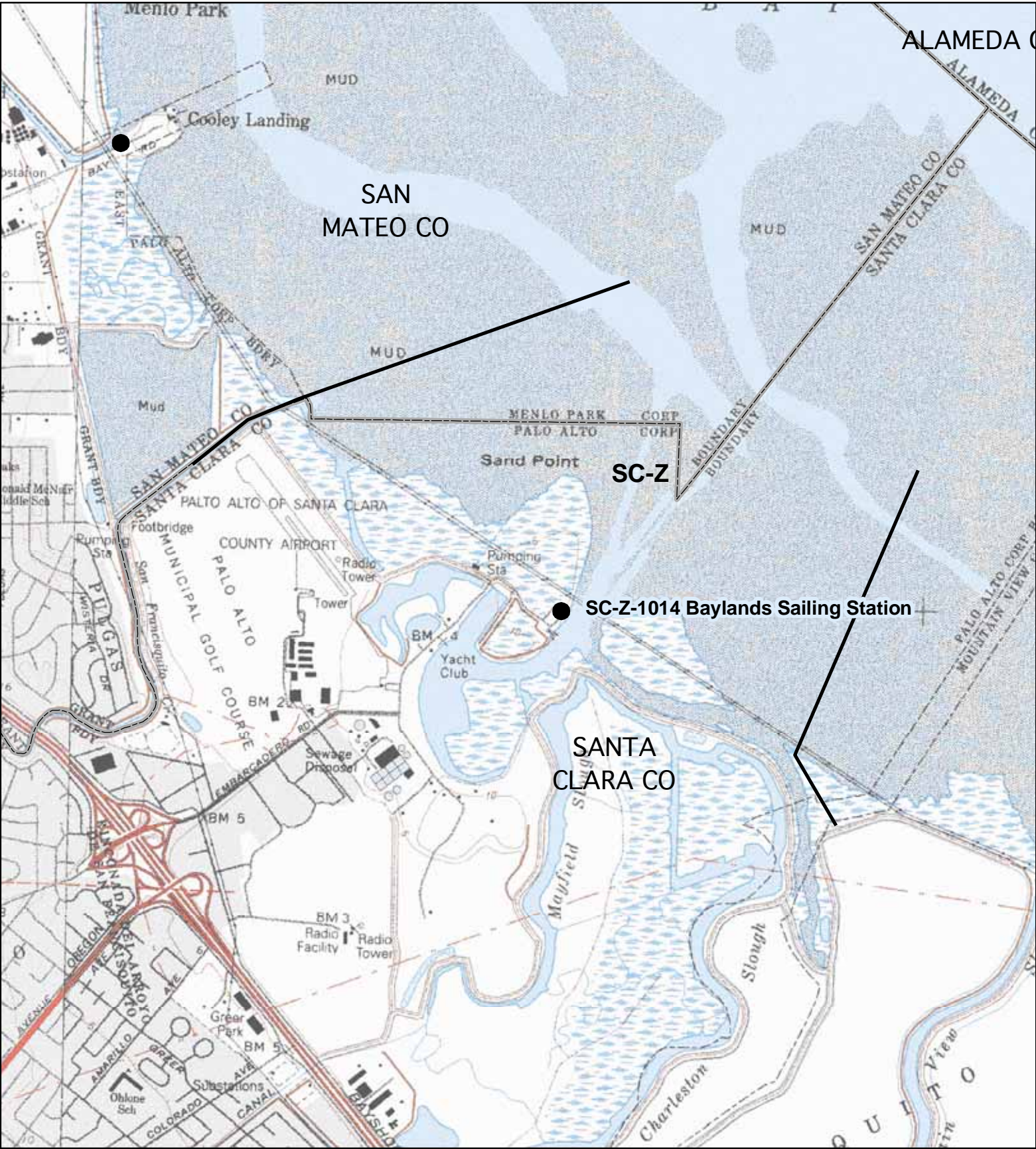


**AL-I-1016 Dumbarton Pier.** Northern edge of site adjacent to the Dumbarton Bridge.



**AL-I-1016 Dumbarton Pier.** Looking south.

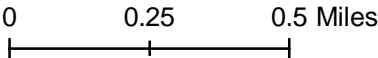
Santa Clara County, Division Z - Access Names



Legend

- Access Names
- Division Lines

Source: C. Haffner - DFG-OSPR



## Operational Divisions and Access Points in GRA 3

**SC Division Z**

**County** Santa Clara

### Division Boundaries

<b>North</b>	San Mateo/Santa Clara county line	<b>Latitude: N</b> 37.46604	<b>Longitude: W</b> 122.11497
<b>South</b>	Charleston Slough	<b>Latitude: N</b> 37.45299	<b>Longitude: W</b> 122.09122

### Division Description

Division's shoreline is made up of tidally influenced wetlands with exposed mudflats at low tide(s). Direct access to shoreline is difficult. Charleston and Mayfield Sloughs are located within the division.

### Cultural Information

There are probably historic and cultural sites present. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**Sensitive Sites Within Division:** [2-372-A](#) Charleston and Mayfield Sloughs

### Individual Access Points in: SC Division Z

**Access Point:** SC - Z - 1014 Baylands Sailing Station

**Thomas Guide Page:** 253 **Grid:** A1 **City:** Palo Alto

**GPS Coordinates:** N 37.45796 W 122.10212 **USGS Quad:** Mountain View

#### **Directions:**

From Hwy 101: Take Embarcadero exit. Proceed to Baylands Reserve.

#### **Site Description:**

Marsh vegetation lines shoreline. Shallow mudflats exposed at low tide(s). Byxbee Park (<1 mile) south of area. Parking area has ~25 spaces. Can launch small skiffs/kiyaks by hand.

#### **Sensitive Sites:**



**SC-Z-1014 Baylands Sailing Station.** Looking east towards SF Bay (at low tide).



**SC-Z-1014 Baylands Sailing Station.** Looking inland (at low tide).

# San Francisco County, Division A - Access Names



## Operational Divisions and Access Points in GRA 3

**SF Division A**

**County** San Francisco

### Division Boundaries

<b>North</b>	Hunter's Point Naval Shipyard	<b>Latitude: N</b> 37.73545	<b>Longitude: W</b> 122.36421
<b>South</b>	San Francisco/San Mateo county l	<b>Latitude: N</b> 37.70842	<b>Longitude: W</b> 122.37424

### Division Description

The northern portion of the division is made up of Hunter's Point Naval Shipyard, while the south portion lies within Candlestick Point State Recreation Area. Shoreline to the north is primarily lined with man-made structures transitioning to rip-rap (as one moves south) interspersed with sandy/beach-like shoreline.

### Cultural Information

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**Sensitive Sites Within Division:** [2-352-B](#) South Basin, Hunter's Point

### Individual Access Points in: SF Division A

**Access Point: SF - A - 1016 Candlestick Point SRA**

**Thomas Guide Page:** 249 **Grid:** D3 **City:** San Francisco

**GPS Coordinates:** N 37.71088 W 122.38084 **USGS Quad:** San Francisco South

#### **Directions:**

From Highway 101: take Harney Rd. exit Proceed to park entrance just east of Monster Park.

#### **Site Description:**

Large recreational park with various shoreline types. Shoreline ranges from rip-rap to fine grain sand pocket beaches. ~80% of the shoreline is made up of rip-rap. Public fishing pier on southeast point. Large parking area, >100 spaces.

**Sensitive Sites:** [2-352-B](#)



**SF-A-1016 Candlestick Point SRA. View of shoreline looking north.**



**SF-A-1016 Candlestick Point SRA. View of shoreline looking north.**

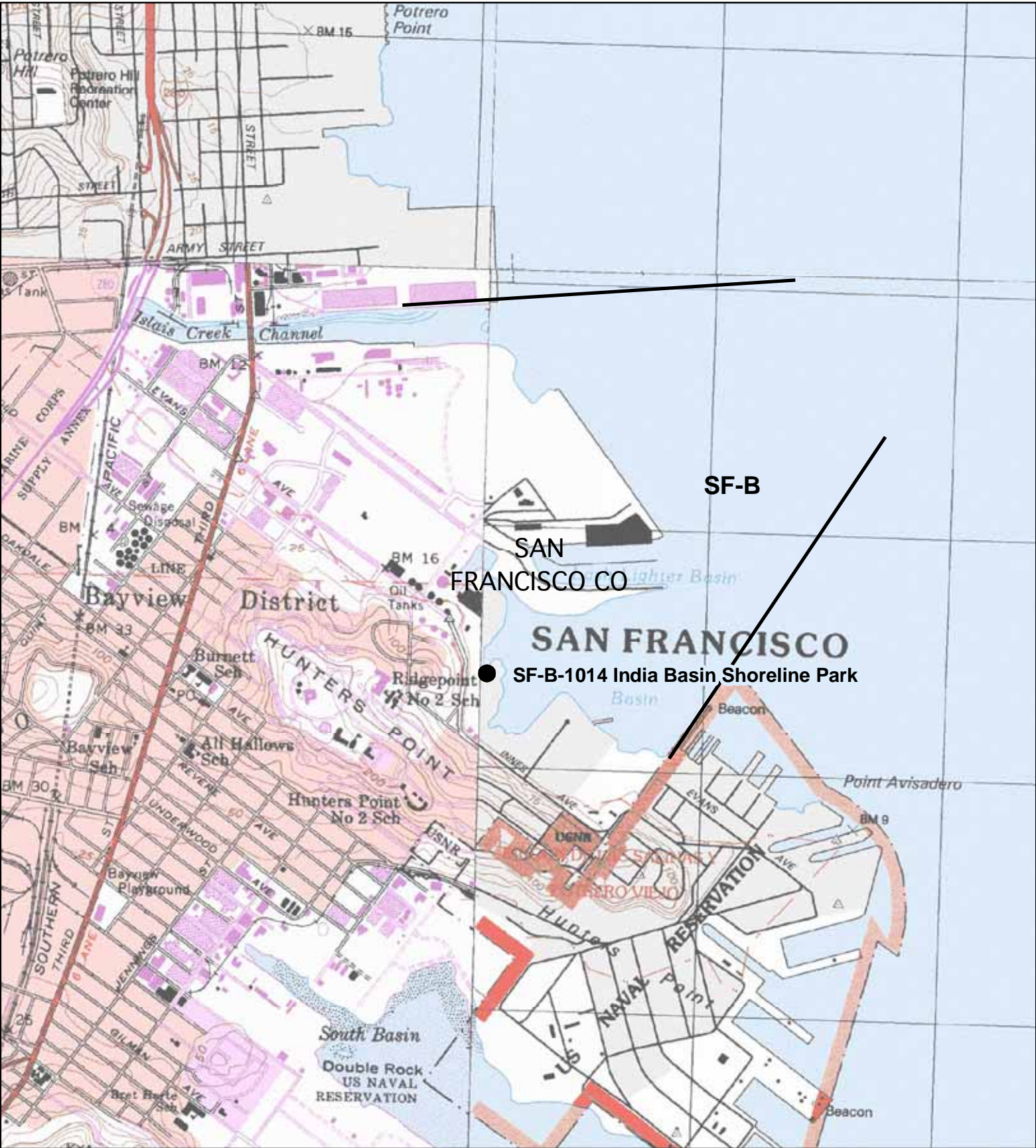


**SF-A-1016 Candlestick Point SRA.** View of southern shoreline looking west.



**SF-A-1016 Candlestick Point SRA.** Looking north toward Hunter's Point Naval Shipyard.

# San Francisco County, Division B - Access Names



## Legend

- Access Names
- Division Lines

Source: C. Haffner - DFG-OSPR

0 0.125 0.25 0.5 Miles

## Operational Divisions and Access Points in GRA 3

SF Division B

County San Francisco

### Division Boundaries

North	Islais Creek	Latitude: N 37.74884	Longitude: W 122.37577
South	Hunter's Point Naval Shipyard	Latitude: N 37.73545	Longitude: W 122.36421

### Division Description

This division lies within an industrial area of San Francisco. Most of the shoreline is comprised of man-made structures, though the southern portion of the division is a wetland restoration area. Access to shoreline is limited.

### Cultural Information

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**Sensitive Sites Within Division:** [2-353-A](#) Heron's Head - India Basin  
[2-354-A](#) Islais Creek - Pier 94 Saltmarsh

### Individual Access Points in: SF Division B

**Access Point: SF - B - 1014 India Basin Shoreline Park**

**Thomas Guide Page:** 249 **Grid:** D2 **City:** San Francisco

**GPS Coordinates:** N 37.73487 W 122.37575 **USGS Quad:** San Francisco North

#### **Directions:**

From Highway 101: take Ceasar Chavez exit. Proceed east on Ceasar Chavez. Right on Evans. Proceed to Park.

#### **Site Description:**

Shoreline primarily rip-rap near park area. Find grain sandy beach area along the southern portion of India Basin. There are numerous submerged objects off shore. Access to other portions of the shoreline are just off Evans/Hunters Point Blvd.

**Sensitive Sites:** [2-353-A](#)



**SF-B-1014 India Basin Shoreline Park.** View of northern portion of India Basin.



**SF-B-1014 India Basin Shoreline Park.** View of southern portion of India Basin.

# San Francisco County, Division D - Access Names



SF-D  
SAN  
FRANCISCO CO

SF-D-1014 China Basin

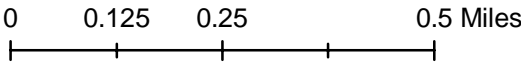
Beacon  
Mission Rock  
Terminal  
Beacon



## Legend

- Access Names
- Division Lines

Source: C. Haffner - DFG-OSPR



## Operational Divisions and Access Points in GRA 3

SF Division D

County San Francisco

### Division Boundaries

North	Bay Bridge	Latitude: N 37.79102	Longitude: W 122.38549
South	China Basin	Latitude: N 37.77675	Longitude: W 122.3874

### Division Description

This shoreline within this division consists of man-made structures including piers, seawalls and riprap. Access to shoreline is off of Hwy 280/Embarcadero. Highly economic area.

### Cultural Information

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

### Sensitive Sites Within Division:

### Individual Access Points in: SF Division D

Access Point: SF - D - 1014 China Basin

*Thomas Guide Page:* 326 *Grid:* G6 *City:* San Francisco

*GPS Coordinates:* N 37.77593 W 122.38794 *USGS Quad:* San Francisco North

#### *Directions:*

From Highway 80: Take 5th Street exit. Left on Brannan. Right on 2nd. Right on Embarcadero. Left on 3rd.

#### *Site Description:*

Shoreline is made up of rip-rap and concrete pier pilings. Marina is located on the north side of the basin. AT&T Park located on the north side of China Basin. Large parking lots are located along 3rd Street. Parking lots are associated with AT&T Park.

#### *Sensitive Sites:*



**SF-D-1014 China Basin.** View of marina on the northside of China Basin.

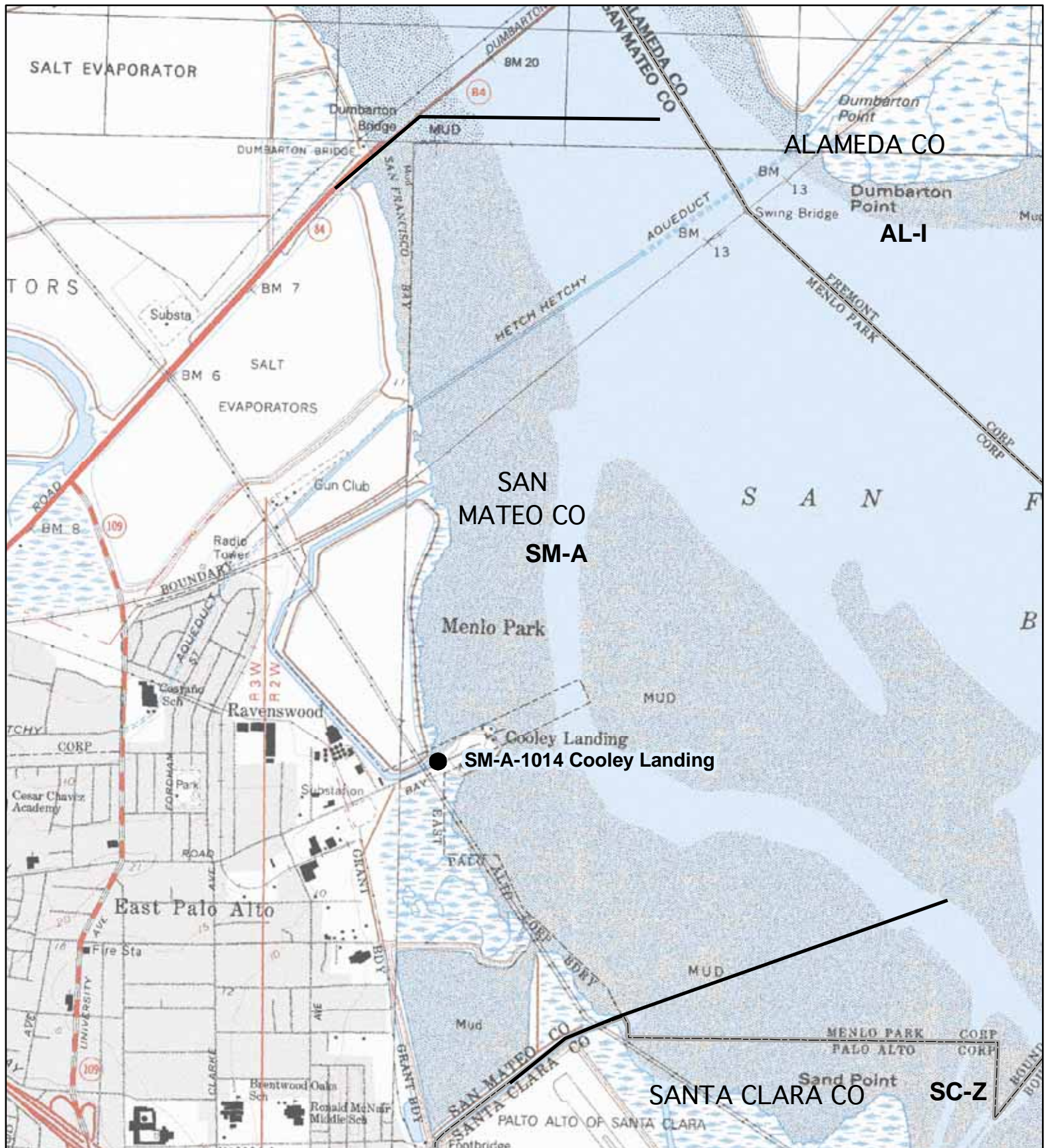


**SF-D-1014 China Basin.** View south of China Basin.



**SF-D-1014 China Basin.** Looking across the basin toward AT&T Park.

# San Mateo County, Division A - Access Names



## Legend

● Access Names

— Division Lines

Source: C. Haffner - DFG-OSPR

0 0.25 0.5 Miles

## Operational Divisions and Access Points in GRA 3

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**SM Division A**

**County** San Mateo

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### Division Boundaries

<b>North</b>	Dumbarton Bridge	<b>Latitude: N</b>	37.49962	<b>Longitude: W</b>	122.12793
<b>South</b>	San Mateo/Santa Clara county lin	<b>Latitude: N</b>	37.45299	<b>Longitude: W</b>	122.09122

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### Division Description

The division lies on the southwest shore of the SF Bay. Shoreline is lined by shallow mudflats with several tidal inlets. Division includes part of the Baylands Nature Preserve.

### Cultural Information

There are probably historic and cultural sites present. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**Sensitive Sites Within Division:** [2-370-A](#) Palo Alto Marsh

### Individual Access Points in: SM Division A

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**Access Point:** SM - A - 1014 Cooley Landing

**Thomas Guide Page:** 250 **Grid:** C7 **City:** East Palo Alto

**GPS Coordinates:** N 37.47583 W 122.12424 **USGS Quad:** Mountain View

#### **Directions:**

From Highway 880: take 84 west (Dumbarton Bridge). Left on University Ave. Left on Bay Road to end. Or Hwy 101, exit University Ave. & right on Bay Road.

#### **Site Description:**

Shoreline consists of tidally influenced wetlands. Shoreline ripa-rapped along Cooley Point. Mudflats exposed at low tide.

**Sensitive Sites:** [2-370-A](#)



**SM-A-1014 Cooley Landing.** View of shoreline north of site.



**SM-A-1014 Cooley Landing.** View of shoreline south of site.

# San Mateo County, Division D - Access Names



## Legend



● Access Names

— Division Lines

Source: C. Haffner - DFG-OSPR

0 0.25 0.5 1 Miles

## Operational Divisions and Access Points in GRA 3

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**SM Division D**

**County** San Mateo

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### Division Boundaries

<b>North</b>	San Mateo Bridge	<b>Latitude: N</b> 37.57406	<b>Longitude: W</b> 122.26189
<b>South</b>	Steinberger Slough	<b>Latitude: N</b> 37.54444	<b>Longitude: W</b> 122.22284

---

### Division Description

A large portion of this division's shoreline is made up of wetland vegetation. Belmont and Steinberger Sloughs are also found within the division. Shallow mudflats are present at low tide(s).

### Cultural Information

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

**Sensitive Sites Within Division:** [2-362-A](#) Belmont Slough

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### Individual Access Points in: SM Division D

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**Access Point:** SM - D - 1014 Belmont Slough

**Thomas Guide Page:** 250 **Grid:** A6 **City:** Foster City

**GPS Coordinates:** N 37.55485 W 122.24844 **USGS Quad:** Redwood Point

#### **Directions:**

From Highway 101: take Hillsdale exit. Proceed to Beach Park Blvd. Park along residential area near slough.

#### **Site Description:**

A large slough lined with saltmarsh vegetation. Paved trail runs along northern portion of slough. Parking is along Beach Park Blvd.

**Sensitive Sites:** [2-362-A](#)

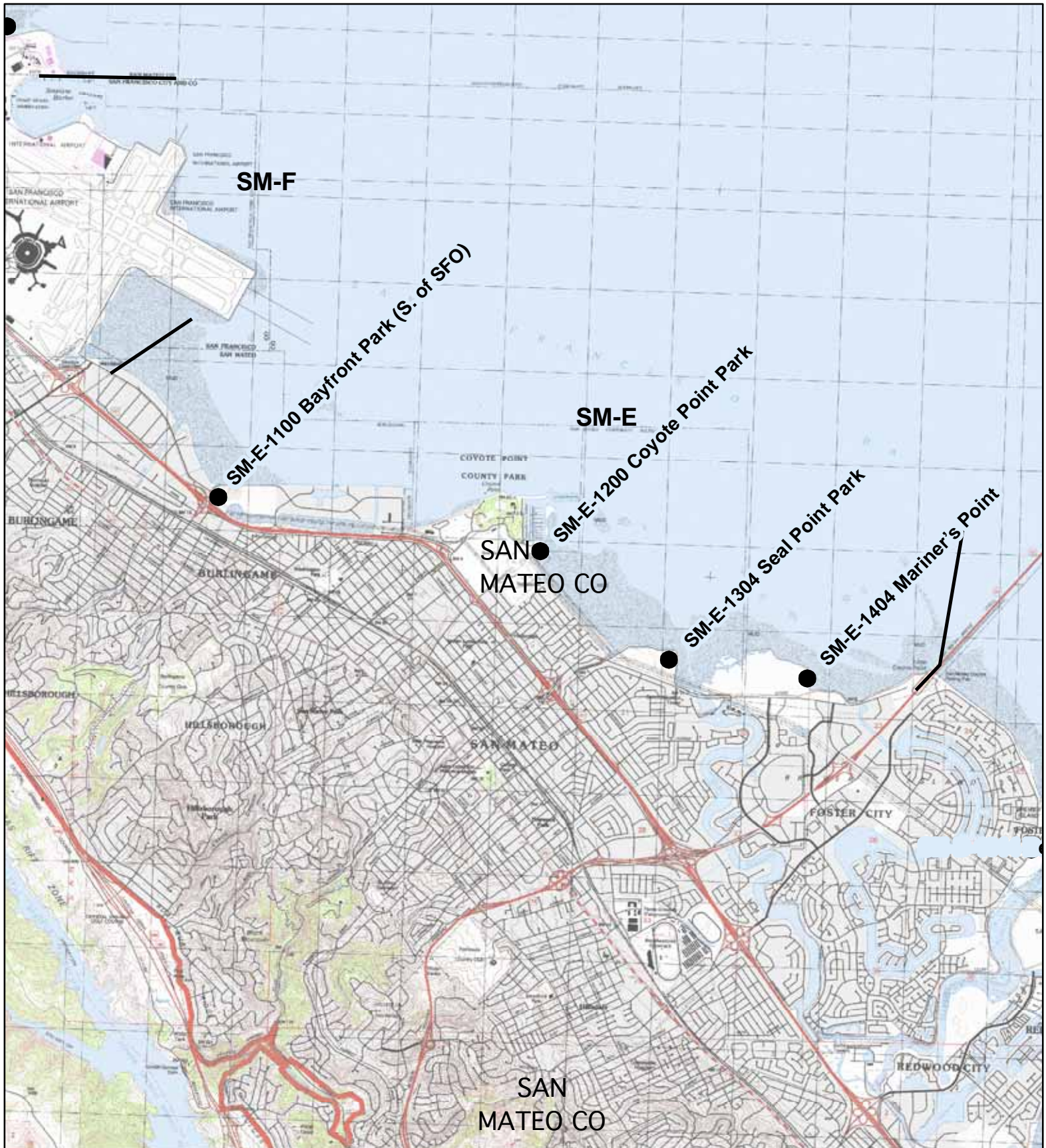


**SM-D-1014 Belmont Slough.** Looking northeast towards SF Bay.



**SM-D-1014 Belmont Slough.** Looking south across Belmont Slough.

# San Mateo County, Division E - Access Names



## Legend

● Access Names

— Division Lines

Source: C. Haffner - DFG-OSPR

0 0.5 1 2 Miles

## Operational Divisions and Access Points in GRA 3

**SM Division E**

**County** San Mateo

### Division Boundaries

<b>North</b>	San Francisco/San Mateo County Line	<b>Latitude: N</b> 37.6049	<b>Longitude: W</b> 122.37227
<b>South</b>	San Mateo Bridge	<b>Latitude: N</b> 37.57406	<b>Longitude: W</b> 122.26189

### Division Description

The division extends from the county border south of San Francisco International Airport to the San Mateo Bridge. There are extensive mudflats that line the shoreline of this division. San Francisco Bay Trail access lines nearly the entire shoreline of this division.

### Cultural Information

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

### Sensitive Sites Within Division:

### Individual Access Points in: SM Division E

#### Access Point: SM - E - 1100 Bayfront Park (S. of SFO)

**Thomas Guide Page:** 327 **Grid:** G7 **City:** Millbrae

**GPS Coordinates:** N 38.60391 W 122.37373 **USGS Quad:** San Mateo

#### **Directions:**

From Highway 101: exit Airport Blvd. Proceed to parking area north of the Marriott Hotel.

#### **Site Description:**

Extensive shallow mudflats extend from shoreline. Areas of saltmarsh vegetation and rip-rap line the shoreline. Waterway outfall northwest of parking area. Limited public parking.

**Sensitive Sites:** [2-361-A](#)

#### Access Point: SM - E - 1200 Coyote Point Park

**Thomas Guide Page:** 250 **Grid:** A5 **City:** San Mateo

**GPS Coordinates:** N 37.58565 W 122.31586 **USGS Quad:** San Mateo

#### **Directions:**

From Highway 101: take Coyote Point Dr. exit. Take frontage road and proceed and follow signs to park entrance.

#### **Site Description:**

Shoreline consists of rip-rap (to the north) and saltmarsh vegetation (to the south). Extensive mudflats are exposed at low tides. Gravel substrate along southern portion of shoreline.

**Sensitive Sites:**

## Operational Divisions and Access Points in GRA 3

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### Access Point: SM - E - 1304 Seal Point Park

**Thomas Guide Page:** 250      **Grid:** A5      **City:** San Mateo

**GPS Coordinates:** N 37.5743      W 122.29811      **USGS Quad:** San Mateo

#### **Directions:**

From Highway 92: exit Foster City Blvd. Left on 3rd Ave. to park entrance.

#### **Site Description:**

Park sits upon a landfill overlooking the South Bay. Shoreline is rip-rapped and is lined by a paved pedestrian trail. Park primarily for public w/dogs. High amounts of recreational use. Approximately 15 parking spaces on hilltop w/ >30 at park entrance.

#### **Sensitive Sites:**

### Access Point: SM - E - 1404 Mariner's Point

**Thomas Guide Page:** 250      **Grid:** A6      **City:** Foster City

**GPS Coordinates:** N 37.57265      W 122.2793      **USGS Quad:** San Mateo

#### **Directions:**

From Highway 92: right on Foster City Blvd. Right on 3rd Ave. Right on Lakeside. Continue towards golf range and take a right to the parking area.

#### **Site Description:**

Shoreline is rip-rapped with a pocket beach located south of the parking area. Beach is made up of medium grain sand and sparse vegetation.

#### **Sensitive Sites:**



**SM-E-1100 Bayfront Park (S. of SFO).** Looking north toward SFO.



**SM-E-1100 Bayfront Park (S. of SFO).** Looking southeast along shoreline.



**SM-E-1200 Coyote Point Park.** View of southern shoreline.



**SM-E-1200 Coyote Point Park.** Looking south across mudflats.



**SM-E-1200 Coyote Point Park.** Looking west.



**SM-E-1200 Coyote Point Park.** View of boat ramp within Coyote Point Marina.



**SM-E-1304 Seal Point Park.** Looking north.



**SM-E-1304 Seal Point Park.** Looking south.

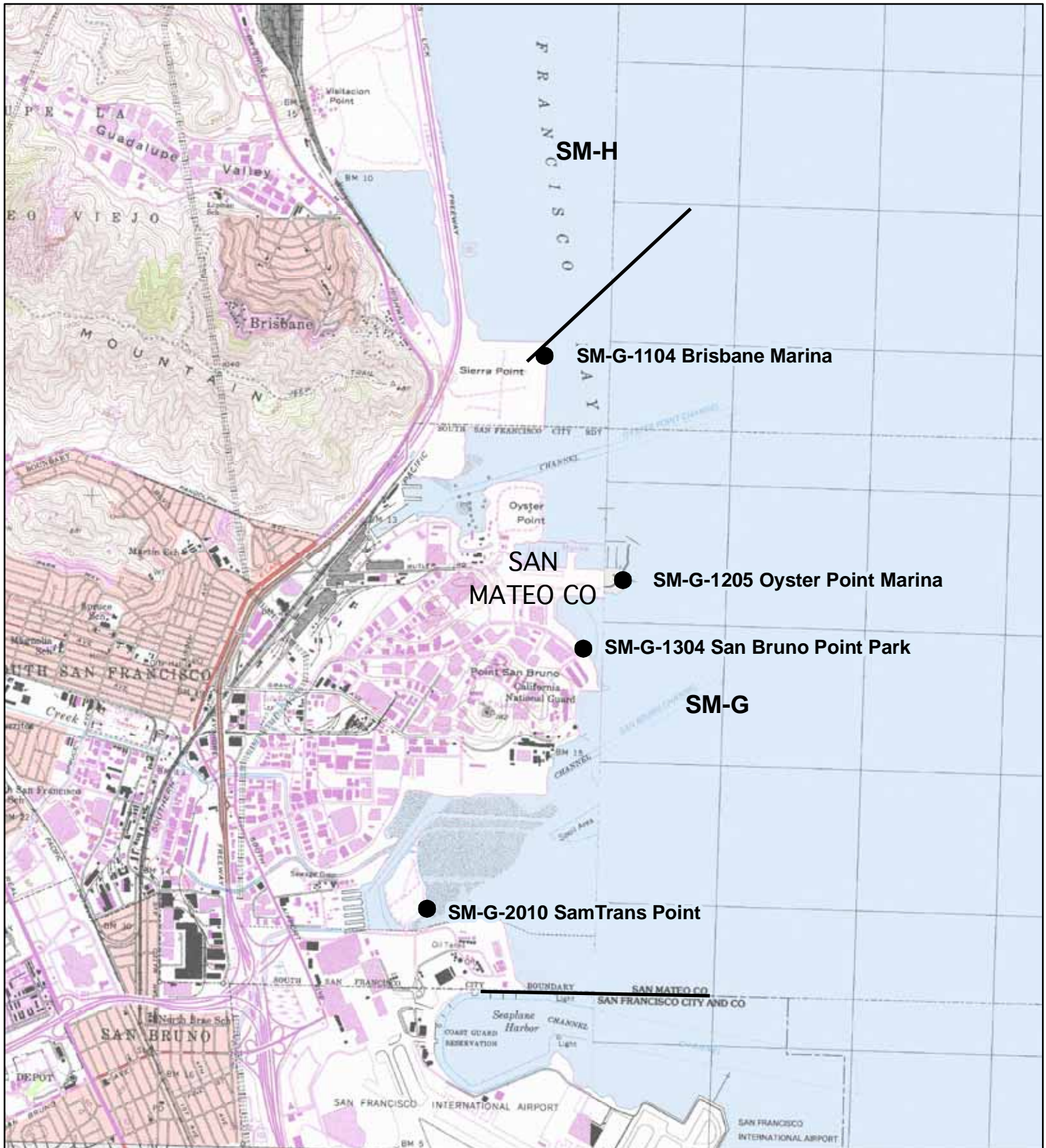


**SM-E-1404 Mariner's Point.** View of pocket beach south of golf range.



**SM-E-1404 Mariner's Point.** View of shoreline looking north.

# San Mateo County, Division G - Access Names



## Legend

● Access Names

— Division Lines

Source: C. Haffner - DFG-OSPR

0 0.25 0.5 1 Miles

## Operational Divisions and Access Points in GRA 3

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**SM Division G**

**County** San Mateo

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### Division Boundaries

<b>North</b>	Sierra Point	<b>Latitude: N</b> 37.67733	<b>Longitude: W</b> 122.38008
<b>South</b>	San Mateo/San Francisco County	<b>Latitude: N</b> 37.6355	<b>Longitude: W</b> 122.37885

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### Division Description

The city of South San Francisco makes up most of the division's shoreline. The shoreline is lined many large businesses (e.g. Genentech) and marinas. Mudflats and wetland habitats occur in the southern portion of the division.

### Cultural Information

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison (916) 653-9125), and the Northwest Information Center (Leigh Jordan, Sonoma State College (707) 664-0880) for specific information on historic or cultural resources in this area.

### Sensitive Sites Within Division:

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#### Individual Access Points in: SM Division G

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##### Access Point: SM - G - 1104 Brisbane Marina

**Thomas Guide Page:** 249 **Grid:** D3 **City:** Brisbane

**GPS Coordinates:** N 37.6763 W 122.38139 **USGS Quad:** San Francisco South

##### **Directions:**

From Highway 101: exit Sierra Point Parkway. Proceed to Sierra Point/Brisbane Marina.

##### **Site Description:**

Site is a marina with a rip-rapped shoreline with a breakwall around the entrance. Public fishing pier at the north end of the marina. Large parking area.

##### **Sensitive Sites:**

##### Access Point: SM - G - 1205 Oyster Point Marina

**Thomas Guide Page:** 249 **Grid:** D4 **City:** South San Francisco

**GPS Coordinates:** N 37.662 W 122.37457 **USGS Quad:** San Francisco South

##### **Directions:**

From Highway 101: take Oyster Point Parkway exit. Proceed to marina.

##### **Site Description:**

Site includes a marina with rip-rapped shoreline. Public fishing pier present. Large parking area. Paved walking path

##### **Sensitive Sites:**

## Operational Divisions and Access Points in GRA 3

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### Access Point: SM - G - 1304 San Bruno Point Park

**Thomas Guide Page:** 249      **Grid:** D4      **City:** South San Francisco

**GPS Coordinates:** N 37.65753      W 122.37766      **USGS Quad:** San Francisco South

**Directions:**

From Highway 101: exit Grand Avenue. Left on Grandview to parking at DNA Way/Forbes Blvd. (adjacent to Genentech parking lot).

**Site Description:**

Shoreline primarily made up of rip-rap. Marsh area located along shoreline between parking area and Oyster Point. Marsh primarily made up of cordgrass and pickleweed.

**Sensitive Sites:**

### Access Point: SM - G - 2010 SamTrans Point

**Thomas Guide Page:** 327      **Grid:** E2      **City:** South San Francisco

**GPS Coordinates:** N 37.64055      W 122.38977      **USGS Quad:** San Francisco South

**Directions:**

From Highway 101: take San Bruno Ave./SFO exit. Right on North Access Rd. to parking area.

**Site Description:**

Shoreline is lined by tidal marsh vegetation made up of dense cordgrass and marsh gumplant. Shoreline rip-rapped at south end.

**Sensitive Sites:**



**SM-G-1104 Brisbane Marina.** Looking west along park's northern shoreline.



**SM-G-1104 Brisbane Marina Point.** View of breakwall along north side of marina.



**SM-G-1205 Oyster Point Marina.** View of shoreline looking north.



**SM-G-1205 Oyster Point Marina.** View of shoreline looking south.



**SM-G-1304 San Bruno Point Park.** Looking north toward Oyster Point.



**SM-G-1304 San Bruno Point Park.** Looking south toward Point San Bruno.



**SM-G-1304 San Bruno Point Park.** Looking northwest.



**SM-G-2010 SamTrans Point.** View of shoreline looking north.



**SM-G-2010 SamTrans Point.** View of shoreline looking east.

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